

The Draw and ResX

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<worksheet link> :)

The Draw: An Overview

Currently, housing is assigned to undergraduate students through a process called The Draw. Individuals and draw groups are assigned to one of three tiers, and within that tier they are assigned a draw number. They submit an ordered list of all the housing options on campus they wish to be considered for. Students and groups are then assigned to the houses from smallest draw number to largest, based on their ranked list.

ResX

The Stanford administration recently announced that they were changing this system. Folks will now be assigned to “neighborhoods” of housing for all 4 years. Rather than tiers, draw numbers will be assigned based on seniority. Folks will draw for housing within their neighborhood and, should they wish to switch neighborhoods, be assigned the lowest lottery number within that new neighborhood.

The Problem

We sought to both improve structural issues that stem from the current draw system and develop a worksheet that will help folks navigate the new neighborhood system. Currently, if folks A, B and C are in a draw group, but person A accidentally submits a different list from B and C, the draw system treats A as an individual and assigns them to housing separately. A is not warned that their list is different or that they've been removed from the group. In addition, the current system is just a table of dorm names and room sizes, so sometimes people can rank dorms incorrectly because they do not know exactly where the dorm is. The new resX system says that all dorms will be split into neighborhoods that students will be assigned to for all four years, but gives no specifications on to how this new system will be implemented. We believe our solution integrates the old housing draw process with the new neighborhood system, as well as fixes some of the problems with the existing draw worksheet.

Our Solution

We created a collaborative worksheets that draw groups can edit together. The worksheet contains a shared list of houses in their neighborhood that they can order by preference. It additionally has an interactive map that displays statistics on previous draw numbers and other statistics for each house. You can add and remove houses to your ranked list, as well as switch rankings around.

One area where we faced challenges was interacting with shared data sets, and how to successfully integrate them with non-permanent data. Lily needs to refocus before it will update data with transition rules, and because of this facts defined by view definitions can change in the time before the transition has started, thus changing the behavior.

Logic Programming

Many of the requirements and structures outlined in ResX are not fully formed or fleshed out yet, so using logic programming to implement our solution makes it easy to restructure neighborhoods as the system is developed. In addition, the draw already exists as a worksheet, so it was simple to adapt the existing model and add additional functionality on top. Finally, logic programming allowed us to easily implement constraints involved with the draw, including a limit on group sizes, limiting visible housing to in-neighborhood houses only, and making an exception for co-ops and ethnic theme houses. Also, when a user is browsing statistics, logic programming can easily change the UI based on factors like group size and gender.

Extensions

An obvious extension that we would love to follow up on is to work with Stanford Residential Education to actually make this worksheet something that students could use in the future.

Link to Worksheet

<http://worksheets.stanford.edu/homepage/view.php?folder=msutton2&sheet=resx>