

## **Purpose**

The purpose of these modifications is to ensure that Wildcards are awarded to the highest-performing teams at a regional by using District Points, which consider all facets of competition. Additionally, large regionals will receive additional Wildcard(s) to level the playing field between larger and smaller regionals.

## **Problems of the Current Regional Advancement System:**

1. Different-sized regionals qualify the same number of teams for the Championship.
  - Regionals range in size from 29 teams (Idaho Regional) to 66 (NYC, LA, Alamo Regionals). The Idaho regional is less than half the size of the NYC regional, but both qualify six teams for Championship.
  - This strikes me as inherently unfair; why should qualifying for Championship at a larger regional be inherently more difficult than at a smaller regional?
  - If a district with  $n$  teams gets  $m$  Championship slots, then a district with  $2n$  teams gets  $2m$  Championship slots, giving all district an even amount of Championship spots per team. Why should districts get fully proportional representation and Regionals get none?
2. The current Wildcard system favors second picks and backups on the finalist alliance over semifinalist captains and first picks.
  - This often allows weaker second picks of first/second alliances to be chosen over strong semifinalist robots, who can *never* receive a Wildcard
3. If there are more Wildcards generated than there are finalists who can use them, Wildcard(s) are lost.
4. Unused Championship invitations, including Wildcards, are lost.
5. District teams that claim Championship invitations at Regionals take a spot from both the Regional's Championship allocation and their district's.
  - In the scenarios described in 3, 4, and 5, a Championship spot is given to a waitlist team, selected at random, rather than a team qualifying on merit.

## **A proposed solution:**

### **Part 1: Give large regionals additional Wildcards**

There is a large chunk of Championship slots that are not allocated to districts or regionals. While this would reduce the number of teams qualifying via the waitlist, I think it would better

recognize successful teams and produce a more competitive Championship if these spots are given to top-performing teams at Regionals.

Unfortunately, there are too many regionals and not enough Championship slots to ensure a fully proportional representation. However, either of the following possible implementations would be significant improvements from the current system:

1. Give an extra Wildcard for each  $n$  teams past some base number, rounded down.
  - A valid configuration for this season is setting the base number to 35 teams, and awarding an extra Wildcard for every 10 additional teams.
  - This way, a regional with under 45 teams would have had 6 Championship spots, and a 66 team regional would have had 9 championship spots.
2. For each regional, calculate how many more teams than some base number each regional has. The number of Wildcards received is proportional to their share of the total of these differences, rounded down.
  - This model didn't work very well for this year. Using a base number of 35, all regionals qualified either 6 or 7 teams, not doing much to solve the problem.

#### Part 2: Qualify Regional Winner, Chairman's Award, Engineering Inspiration, and Rookie All-Star teams for Championship

This process remains unchanged from the current Regional system, with one minor exception: each team that qualifies via these awards and declines their invitation to Championship generates an additional Wildcard.

#### Part 3: Award all possible Wildcards using District Points rankings

Compute District Point rankings for all teams at each regional. The highest ranked teams that have not otherwise qualified for Championship receive Wildcards, using tiebreakers adapted from the District system. If a team declines a Wildcard spot or has qualified for Championship at a previous regional, the Wildcard is offered to the next highest ranked team until all Wildcards have been accepted.

For anyone not familiar with the District Points model:

- 0-24 points are awarded for qualification results
  - In years with strictly Win-Loss-Tie ranking: 2 for a win, 1 for a tie, 0 for a loss
  - Other years (i.e. 2014 and 2016), it is an approximate normal distribution based on rank

- 0-16 for alliance selection
- 10 points for each round of playoffs won
- 5 points per judged award, excluding RAS and EI (8 points) and Chairman's (10 points)

Additional details on the District Point system can be found in the [FRC Administrative Manual](#), Section 7.4.1.

The District Points system holistically captures a team's performance at an event. Compared to finalist alliance position, which only indicates whether or not a team makes it to finals, the District Point system incorporates qualification rounds, alliance selection, *all* playoff round performance, and awards, painting a full picture of a team's success at the competition.

#### Part 4: Change District Team Qualification Rules

If a District team qualifies for Championship at a Regional, generate an additional Wildcard for the Regional. This way, Regional teams receive all the Championship spots allocated for Regionals, and District teams only draw from their Districts' allocations, rather than causing District teams to "double-dip," as they currently do.