



Volleyball Play Charting

Pierre Biencourt, Nicole Weigl, Professor B. Davison

The Problem

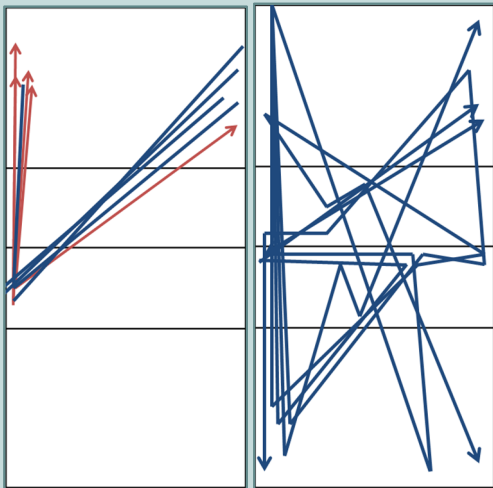
Traditional volleyball statistics track players in isolation, but tell us very little about actions on the court. Traditional statistics simply lack the ability to capture information about which plays and patterns are most effective in a given situation.

Shot Charting

Shot charting is a graphical stat taking method for volleyball.

Shot Charting is comprised of:

- Drawing lines from the origin of a play to its destination
- Generally one chart per rotation



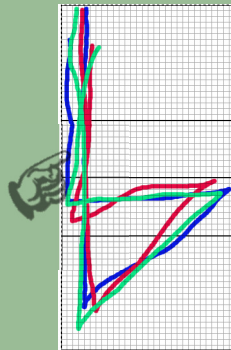
However, as many attacks are drawn, sometimes the patterns can be difficult to see.

How It Works

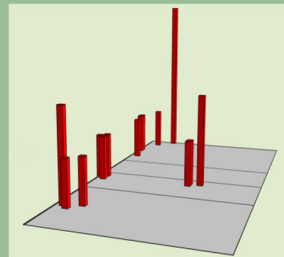
- User draws play in the program
- The program breaks the play into its component actions
- Stores that info to database
- Can analyze data using weighted averages to find the strongest and weakest plays for a team



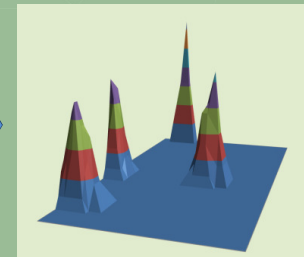
User draws plays



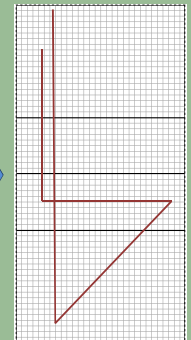
Engine finds frequency of each location



Engine computes a weighted average of frequencies



Returns discovered patterns



Our Solution

Our solution extends shot charting to allow an entire play to be charted and analyzed, not just an attack.

Why our solution is different:

- Looking at entire play charts, even for just one rotation (or long rally) can be very confusing
- The resulting charts are too complex for humans to easily analyze
- Our engine does this analysis for the user

