



Citrus Circuits
Fall Workshop Series

Developing Alliance Match Strategy

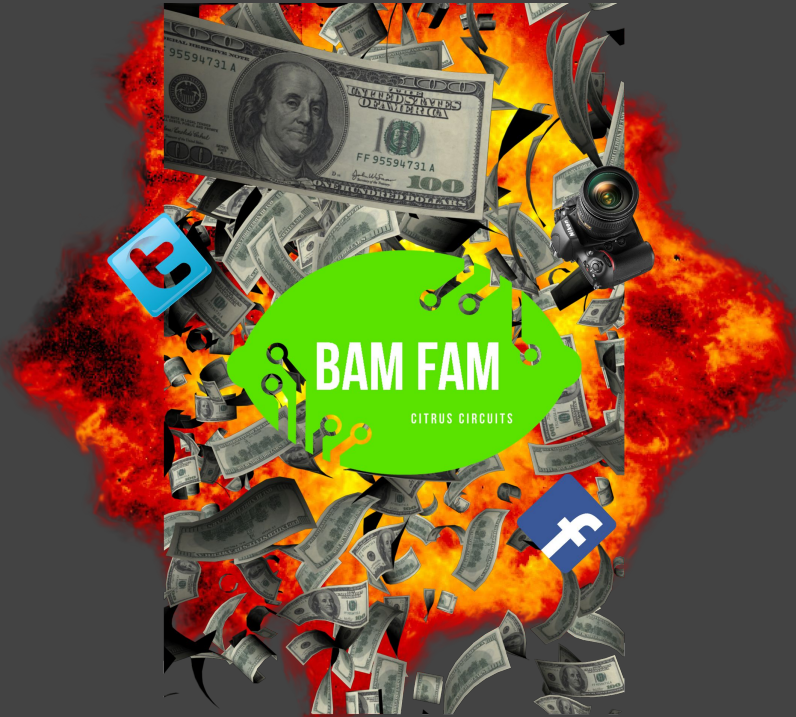
by Kina Li and Richard McCann

“Sample Quote, Sample Quote”



Sample Heading

- Bullet Point A
 - Subpoint A
- Bullet Point B
 - Subpoint B



Sample Heading

- Bullet Point A
 - Subpoint A
- Bullet Point B
 - Subpoint B



Sample Heading



Today's Topics



- History of our alliance choices & strategies
- How we map out our match strategy

Who are we?



Outline

- Why is Strategy Important?
- Match Strategy
 - Preparation & Execution
- Alliances That Worked
- Picklist (opt.)
- Q&A





Why is Strategy Important?

“Your robot wins matches,
your scouting wins competitions.”



Why are you here?

- FRC has designed a unique 3v3 competition with rotating alliances
 - Strategies must be created for different alliance mixes
- Individual robots can win single matches but can't win consistently over a tournament
- Being aware of the alliance's capabilities will increase its likelihood of success!





Match Strategy

Preparation: Game Analysis

- Read the game manual!
- Analyze the game
- “Whats” and “Hows”
- Predict strategies and designs for the season



Preparation: Scouting!

- Live Match Data
 - Objective and subjective metrics
 - ex. in 2022, # of cargo scored, driver awareness, highest climb level
- Pit Data
 - Pit Scouting
 - Drivetrain type, mechanisms, photos
 - SEALS



Preparation: Match Goals

- Is 4 RP feasible?
 - Do we focus on the win or the bonus RP?
- Analyze match schedule ahead of time
 - Identify toughest matches
 - Work with partners early



Execution: Match Strategy

- Discuss with all teams present!
 - Take all individual capabilities into account
 - Auto routines?
 - Most consistent, most compatible
 - Teleop roles
 - Strongest scorers, defense?
 - Endgame
 - Speed, compatibility, scoring vs. endgame?
 - Alliance partner requests



Execution: Match Strategy

- Our Alliance vs. Opposing Alliance
 - Strengths, weaknesses, predicted roles & actions
 - Early season/during quals vs. late season/during elims
 - Less defense, more offense, focus on RPs
 - More defense, more complex strategies



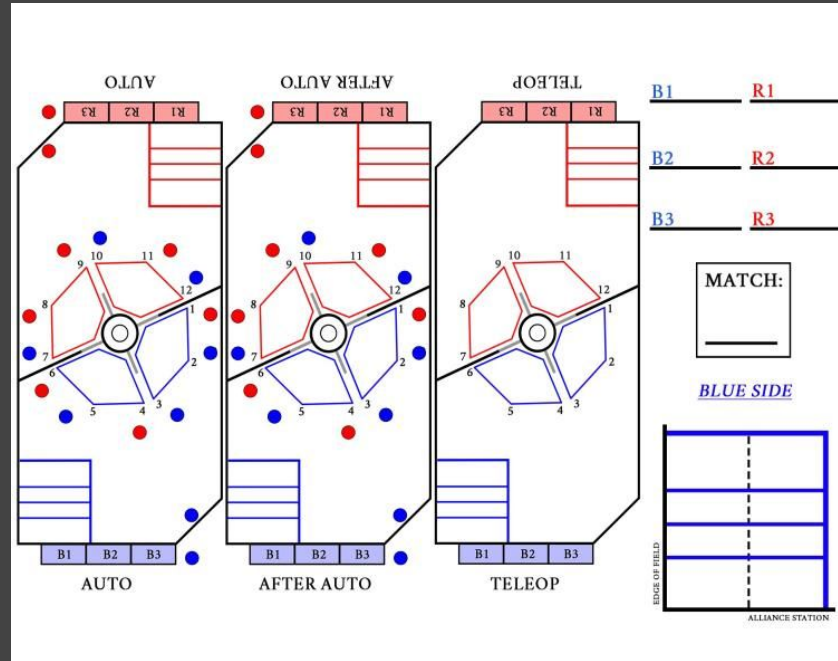
Execution: Match Strategist

- Specific role at competition, separate from drive team
- Advises drive coach
- Meets with alliance partners
- Clipboard/Field Layout

Make the drive team's job easy!



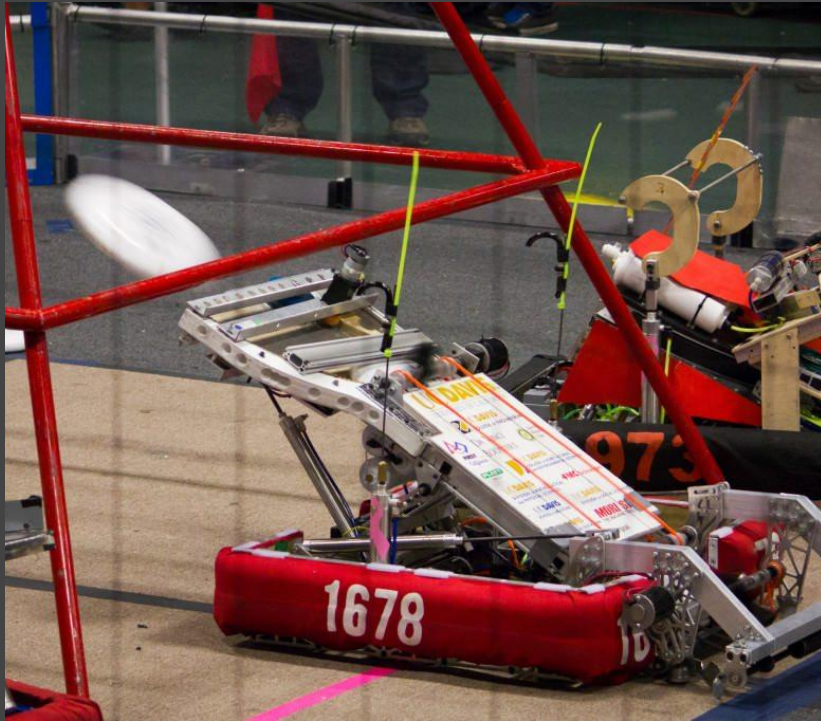
Execution: Match Strategist





Alliances That Worked

What changed for 1678?



- Had won Sac Regional in 2010-2012, but hadn't succeeded at Champs
- New electronic scouting system in 2013
- Switched from focusing on our robot to our **ALLIANCE!**



Alliance Strategy Begins at Kickoff



- Tasks are assigned to alliance mates
- Robot capabilities dependent on other bots

General Rules



- Alliance mates look good
- Be aware
- Take advantage of luck

Past Examples



2013: Protect your most valuable scorer



2014: Everyone contributes



2017: Understand opponents' vulnerabilities



2017: Think unconventionally



2018: Clear roles



2015: And some luck!



Picklist Formation



What if we're a high-seed captain?

- Top ~1-4
- Look for offensive power in your first pick
 - Technical capability is a plus
- Look for utility in your second pick
 - Often auto/endgame points
 - Versatility in teleop
 - The higher you seed, the lower your second pick
- Scout!



What if we're a low-seed captain?

- Top ~5-8
- Prepare for all scenarios; game it out
- Look for complimentary strength in your first pick
 - Pick a robot that can do what you can't do
- Your second pick should fill holes
 - Which alliance captain will you face?
 - You will have a strong second pick
- Scout!



What if we're not seeded high?

- Talk to the teams that are seeded high
 - Find out their criteria
 - This presentation is an example!
 - Could you be a first pick or a second pick?
 - First pick - offensive power (usually)
 - Second pick - alliance dependent
 - Understand that any alliance can pick you
- Be cooperative in quals and follow match strategies
- Be reliable and consistent
- Scout!



Resources

- Scouting Whitepaper:
citruscircuits.org/scouting
- CD: chiefdelphi.com
- TCA:
thecompassalliance.org





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strategy@citruscircuits.org

Thank You!