



Iron Reign

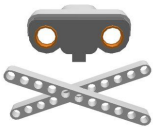
Worlds 2018

Team 6832

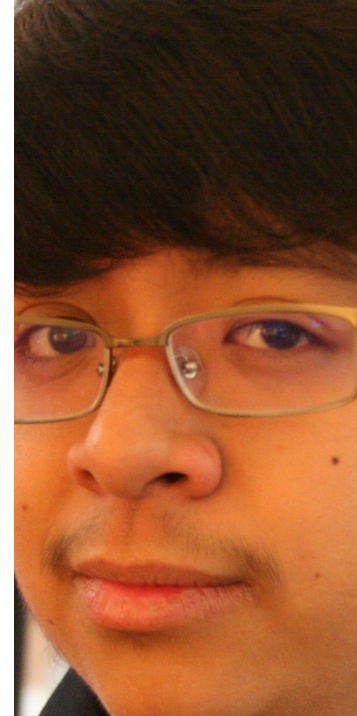
Iron Reign

- 7th year of FTC
- 5 years of FLL
- Members with half their lives on team
- Travis → SEM

IRON REIGN



Journey to worlds



Pre-Season Strategy Considerations

- Focus on winning or on growth?
- Focus on robot game or awards?
 - Chances of doing both with excellence are remote
 - How to balance awards categories?
- How much dedication are you going to put in?
 - How many practices / scrimmages / competitions?
 - How many hours do members need to put in throughout the season?
 - Do you need a team contract?
 - What's your balance between work and play?



Pre-Season Strategy Considerations

- If you're going to be a well-rounded team:
 - How are you going to do outreach?
 - How are you going to gain funding and engineering connections?
 - How is your engineering journal going to be set up?
- How is your team going to be structured?
 - Strict hierarchy vs. creative chaos?
- Does your team have any skill gaps?
 - 3D modelling, programming, building, writing, driving, logistics, business



Strategies for Awards-based Advancement

- Be a well-rounded team
 - Don't just focus on one award or robot game
 - Seek sponsors and \$\$\$
 - WORK ON YOUR ENGINEERING JOURNAL IN DETAIL!
- Make it easy for the judges to understand your engineering journal
- In any given tournament, be charismatic!
 - Judges will enjoy listening to you more
 - You'll stand out more in a field of 30+ teams
- Gracious Professionalism
 - This may seem like a meme, but its actually important - Judges love it when you help other people out



Build Experience Through Competition

- Multiple Scrimmages, hosted and led DISD scrimmage
- Qualifiers – SEM hosted, competed in 3, including Oklahoma
- North Texas Regional Championship
- Oklahoma State Championship (OK closed region going forward)
- Super Regionals
- World Championship in Houston
- Texas State UIL Championship
- Black light post-season tournament



Potential Advancement Calculations This Year

- 128→ 160 teams at Worlds
- 36 Lottery Spots so 124 teams left
- 30-40 international teams so worst case 84 teams left for U.S. advancement
- No Super-Regional so those 84 advance from Region to Worlds
- Assuming even split, 42 advance from “South regions” instead of 72
- Texas census proved more teams
- About 6-7 teams from NTX
 - All Inspire Award Winners
 - Winning alliance
 - Maybe Think

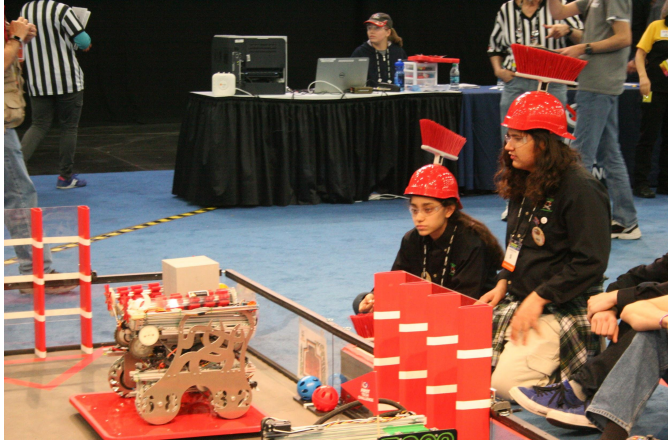


Judging and Pit Presentation

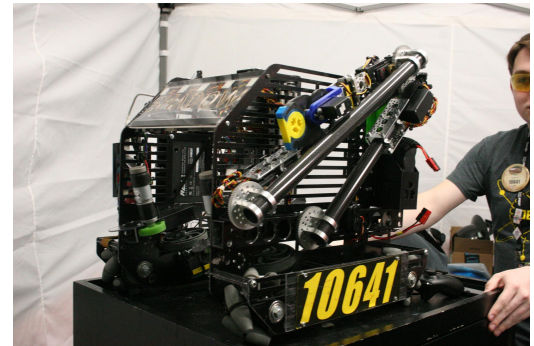
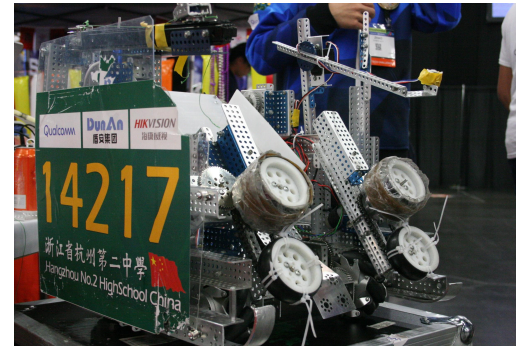
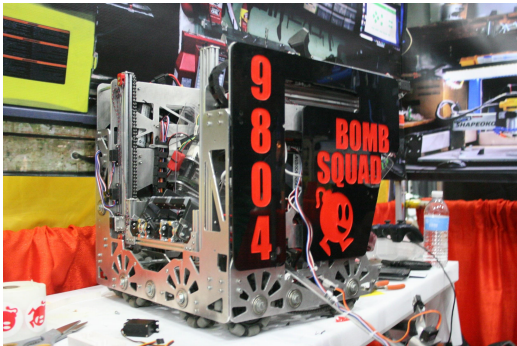
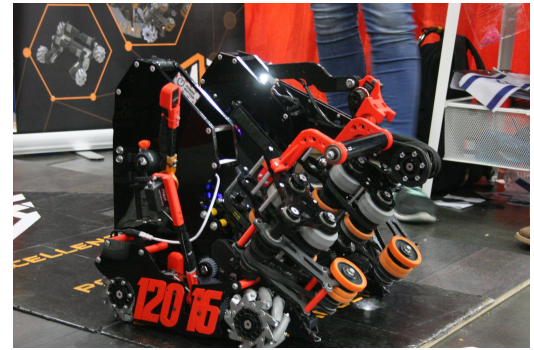
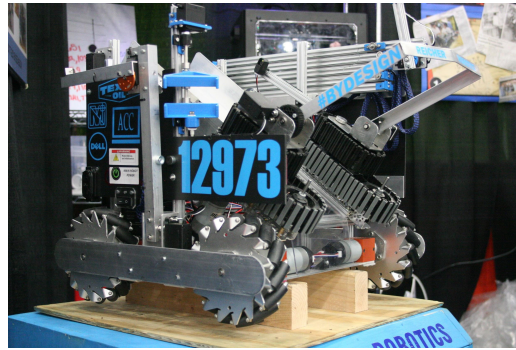
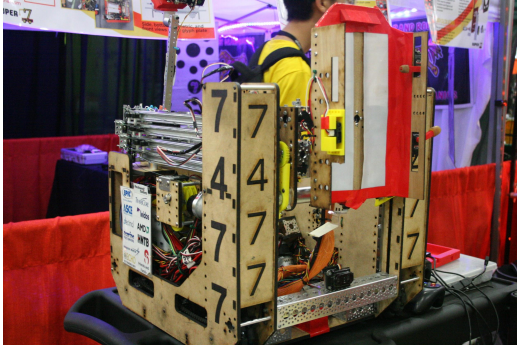
- How your pit appears is important
 - A clean pit with posters and other decoration will leave a better impression on judges
 - Include some informational posters to catch judges' eyes
- Judging - the most important part of our day
 - Practice presentation
 - Summarize your information as much as possible, while still conveying all of it
 - Play to your strengths
 - If you're funny, be funny
 - If you're direct, be direct
 - You can dance if you wannoo
 - This is how you win awards, and **get judges to come back to your pit for more information**



Worlds Experience



Worlds Robot Inspiration



Worlds Robot Inspiration

- See what other teams are doing
- We took photos of every team's robot at Houston Worlds:
- <https://goo.gl/D41p5P>
- What build systems are in use?
- How many teams use multiple systems / custom fabrication?
- What drive-trains are in use?
 - Mecanum dominant in 2018
 - Good for open flat fields
 - Might not be so relevant for Rover Ruckus
- Research the results throughout the season
 - <https://theorangealliance.org>
 - Delta between what teams say and do



Earning the Motivate Award



Earning the Motivate Award

- 3 year commitment to developing our mobile learning laboratory (MXP)
- Year one focused was a pilot build and learning to operate the vehicle/program with Dallas City of Learning
- Year two focused on sustaining summer operations to improve experience for kids
- Year three (this summer / post Worlds) centered on institutionalizing year-round operations
- Now we are trying to get a brand new built-to purpose vehicle launched with new funding
- Each year we only claim credit for the new work on the initiative that year
- But demonstrating a year-over-year commitment to an innovative service model got us considered at Worlds
- Delta between Motivate/Connect in North Texas vs. Worlds



Earning the Motivate Award - Luck plays its part

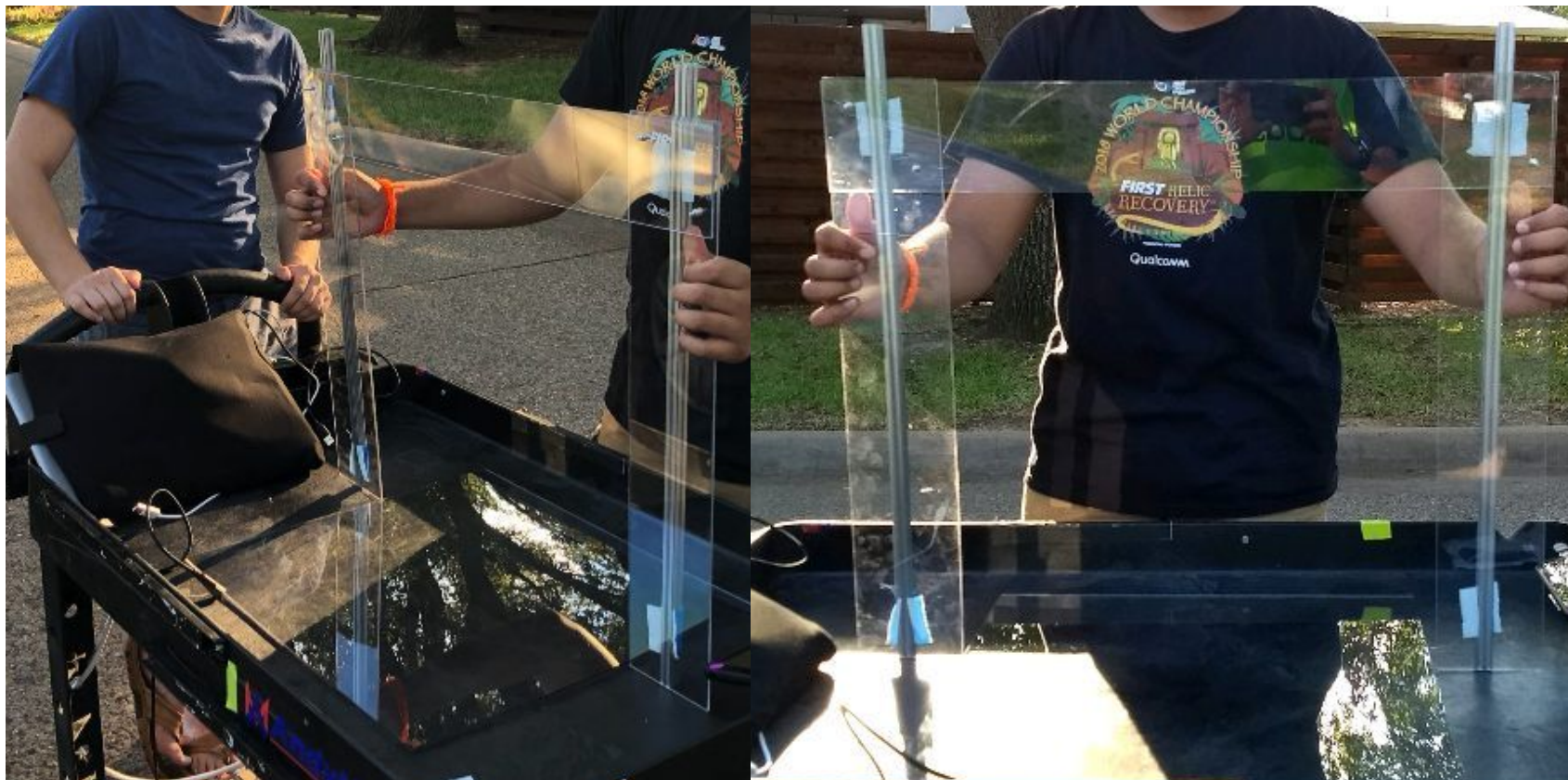


At our pit, FLL Team 16784, IvyBots - Odessa FL

- 3 explicit visits to our pit by judges about outreach
- Told they were having trouble deciding between teams
- 5 teams recognized as runners up in the category
- Florida FLL team on lottery at Worlds visits us during judge deliberations
- We go into full engagement mode, giving them guidance on FLL and FTC
- Turns out judges are still watching us - likely deciding factor



Inspection Tool vs Sizing Box



Drive Team

- Tycho (Alumni), Karina, Abhi and Justin
- Late season team change (sickness at supers)
- Drive practiced sacrificed to complex robot development
- Heavy reliance on strong autonomous (multi glyph at worlds)
- Teams that allocate relentless drive practice do better in game - Red Nek Wun claims 30hrs/week drive practice



Environmental Factors: Phone and Static

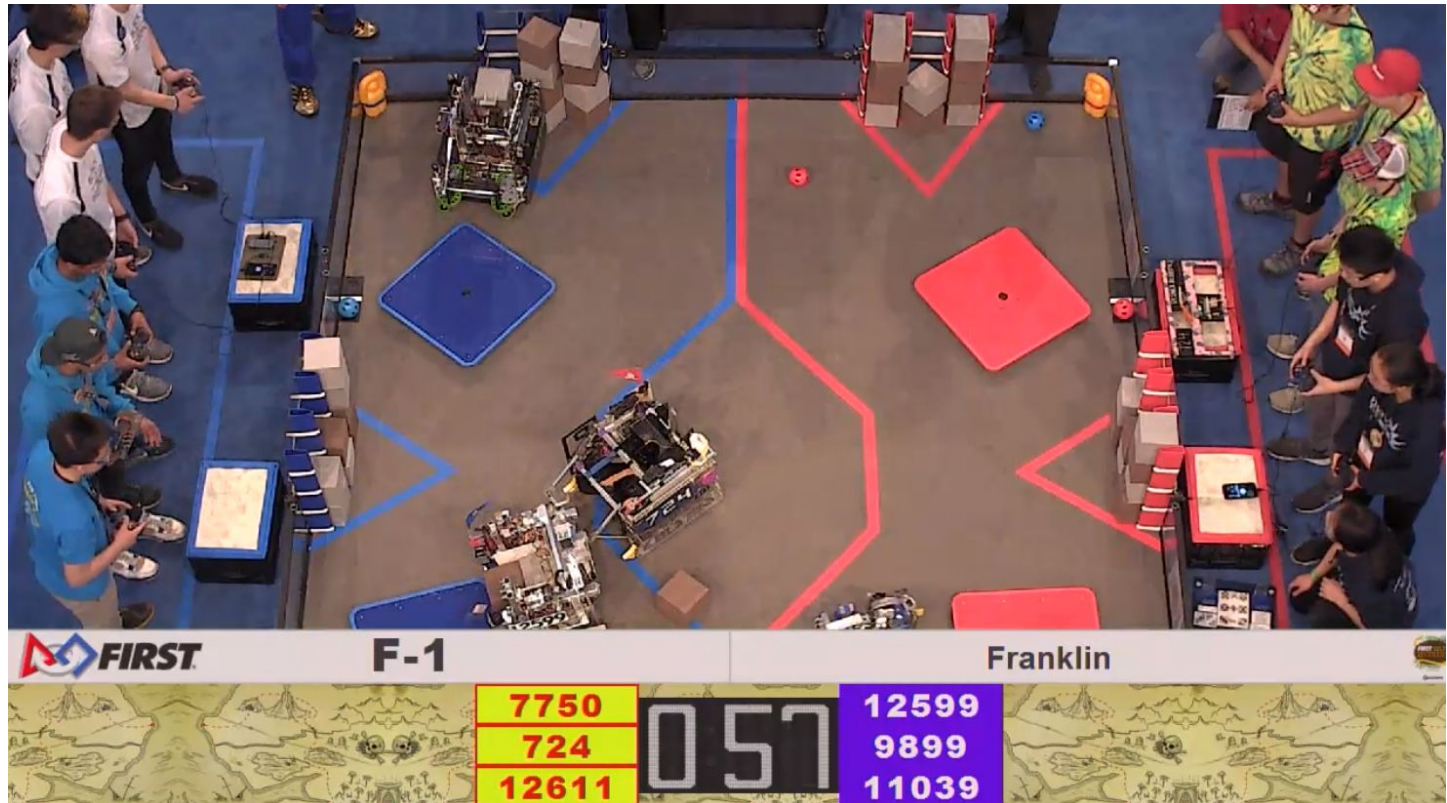
- Ping Values
 - Constantly rising
 - 22 second delay
 - Our Division channel 6 (other division fewer problems on channel 11)
 - Audience interference
 - Minimize Telemetry
- Static Field (placing relic)
 - Better with REV than MR
 - Static remains an issue - use staticide
 - Insulate your robot where it will engage border or other bots
- Phone mount crushed



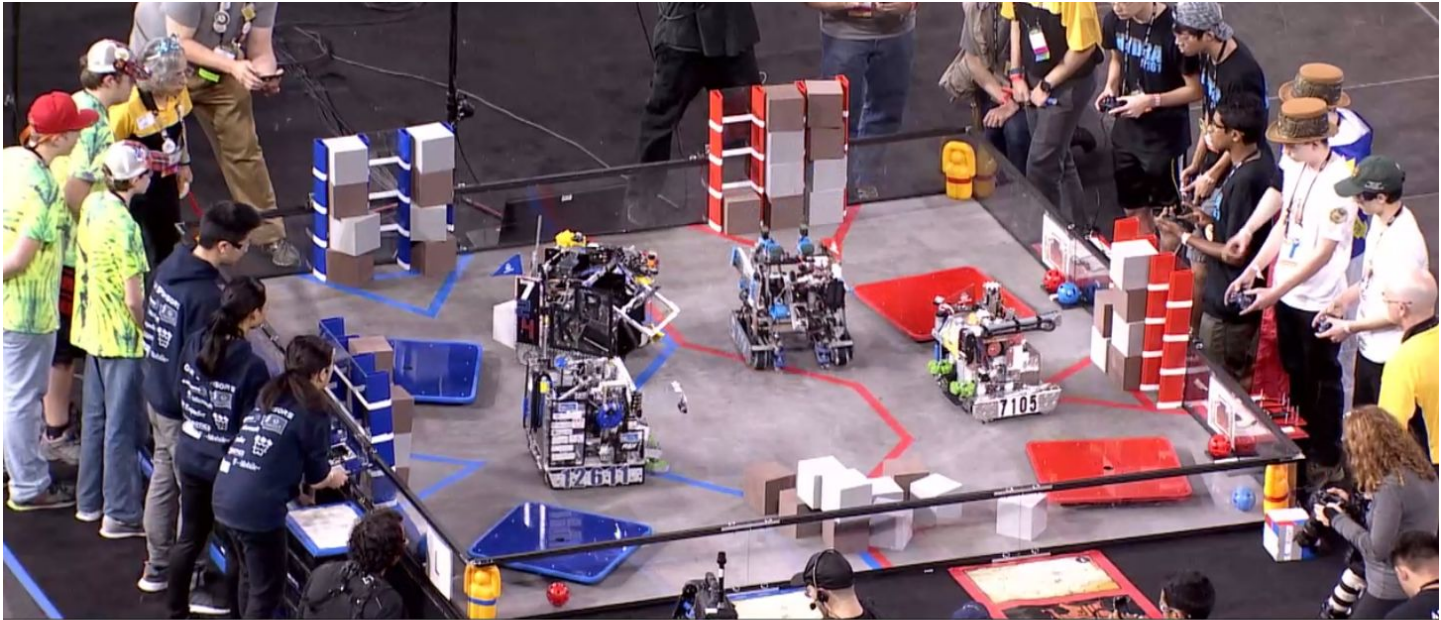
Alliance Selection



Defense in Relic Recovery



Live Scoring



FIRST Finals Match 2 **FIRST Championship Houston**

Team	Score	Robot ID	Game State
Blue	275	7750	Blue
Blue		724	Blue
Blue		12611	Blue
Red	240	7105	Red
Red		7161	Red
Red		7209	Red

The image shows a live scoring interface for a FIRST Robotics competition. The top section is a photograph of the match. The bottom section is a scoreboard. The scoreboard is divided into two main sections: 'Finals Match 2' and 'FIRST Championship Houston'. The 'Finals Match 2' section shows the scores for the Blue and Red teams. The Blue team has a score of 275, and the Red team has a score of 240. The 'FIRST Championship Houston' section shows the scores for the Blue and Red teams. The Blue team has a score of 67, and the Red team has a score of 67. The scoreboard also displays the robot IDs for each team: Blue (7750, 724, 12611) and Red (7105, 7161, 7209). The game state is indicated by colored squares (Blue and Red) and a central green square.



Team Culture



So winning games is cool and all, but team culture is the most important thing

