

STRATEGY

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2016

A group of people, likely students or team members, are gathered around a table in a competition arena. They are wearing blue and white shirts, some with numbers like '241' and '255'. In the background, there are various pieces of equipment, including a red and black box, a yellow and black box, and a digital display showing '2590'. The scene is set in a large, well-lit room with a high ceiling and a blue wall. The word 'INTRODUCTION' is overlaid in large, white, sans-serif font across the center of the image.

INTRODUCTION

Agenda

1

Recommended Tools

2

I Got The Match Schedule,
Now What....

3

What To Do If Your Robot Moves!

4

This Wasn't In The Strategy...

Agenda

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How To Be Annoying...Effectively!

6

It's The Final Countdown

7

Spot The Difference!

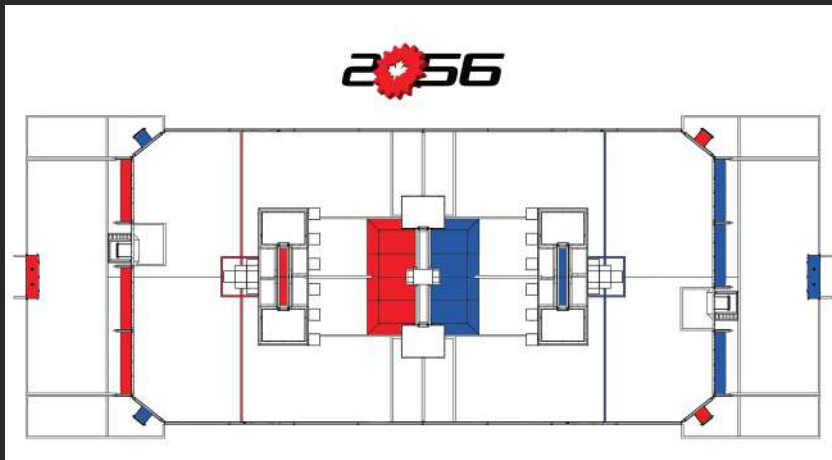
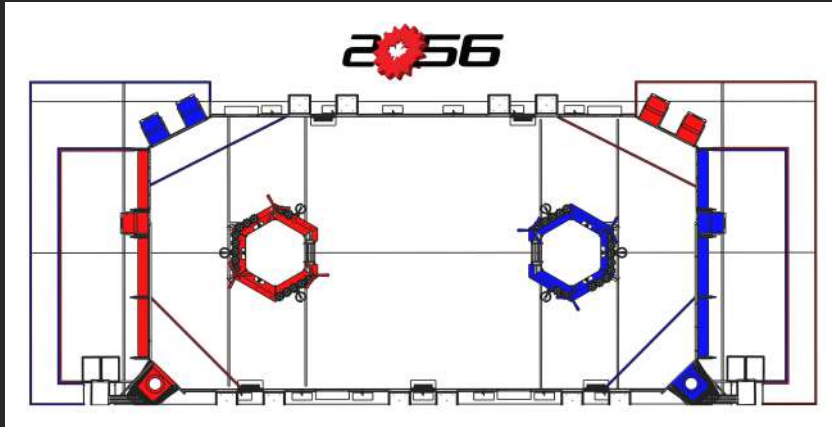
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Lets Not Kill The Coach...

1

Recommended Tools

Strategy Board



Strategy Board



Writing tools

Strategy Board



Writing tools



Recording Cameras

Strategy Board



Writing tools



Recording Cameras



Comfortable Shoes

Strategy Board

Writing tools

Recording Cameras

Comfortable Shoes

Patience



2

I Got The
Match Schedule,
Now What...

Offensive:

The scoring robot on
your alliance

Defensive:

The robot that
reduces the scoring
efficiently of the other
alliance

The scoring robot on
your alliance

Offensive:

Example

Individual team score produced
vs
The amount of cycles prevented

2019 IRI Indianapolis, IN



Example

How to know who is more susceptible to defence

2019 IRI Indianapolis, IN



3

What To Do If Your Robot Moves!

```
{
```

```
AutonomousInit()
```

```
{ Printf ("Autonomous Init Started\n");
```

```
Flexible with your alliance's  
capabilities (); }
```

```
}
```

Example

The maximized points/game pieces
Vs
More flexibility for start of teleop





00:30 Rule

- Initial pick up location for game pieces
- Initial scoring positions

Example

Major mistake because
of the first 30 seconds



4

This Wasn't In
The Strategy...

A Contingency Plan

After Autonomous

Comparing your
opponent's scored
pieces to your own

Middle of Game

The 80 second
Rule and
switching off

End of The Game

If a robot cannot
complete the
end game task

Example



Middle of game
contingency plan

The image shows an aerial view of a FIRST Robotics competition arena. The arena is a large, dark rectangular field with a central red and blue line. Two robots are positioned at the top of the field, and a large, multi-colored robot is in the center. The arena is surrounded by a crowd of spectators. At the bottom of the image, there is a scoreboard overlay with the following information:

FIRST		Einstein Final 2		FIRST Championship - Detroit		DESTINATION: DEEP SPACE		AMERICA	
2	2	6	ARCH	57	DARW	8	2	0	
2	2	1	930		3707	3	3	1	
			1310	55	59				
			5406						

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How To Be
Annoying...Effectively!

DEFENCE...



Preparing Your Defensive Driver

1. Analyze your opponent's robots mechanically
2. Line up your defensive robot with the best line of sight to their targeted offensive robot
3. Determine terminology between driver, coach, and strategist

Example



Positional Defense



Defense that harasses one
robot to reduce their total
scored game pieces

...Man to Man Defense

Example



Man to Man Defense



...What Do We Prefer?

How to Play Defense

Along protected loading zone

01.

02.

Along scoring goal

Perpendicular to opposing robot

03.

04.

Reset Rule

6

It's The Final
Countdown

Keeping all on end game

Keeping one robot on offense

Keeping one robot on Defense

End Game Strategies

Example



One offence robot stays

The image shows a FIRST Robotics Competition match in progress. A volunteer in a grey hoodie with "VOLUNTEER" and "MAGNA" on the back is standing on the right. Two robots are on the field: a blue one with number 6140 and a red one with number 4903. The scoreboard overlay at the bottom provides the following information:

FIRST		Qualification 25 of 80				Technology Division				DESTINATION: DEEP SPACE					
0	1	0	1	4903	83	3683	0	3	2	0	2	6140	0	4	3
0	2	0	0	7800	25	44	0	4	3	0	0	2056	0	0	0
				6070											

Example



One Defense Robot stays



When one team requires full space of end game zone

A sequential arrangement

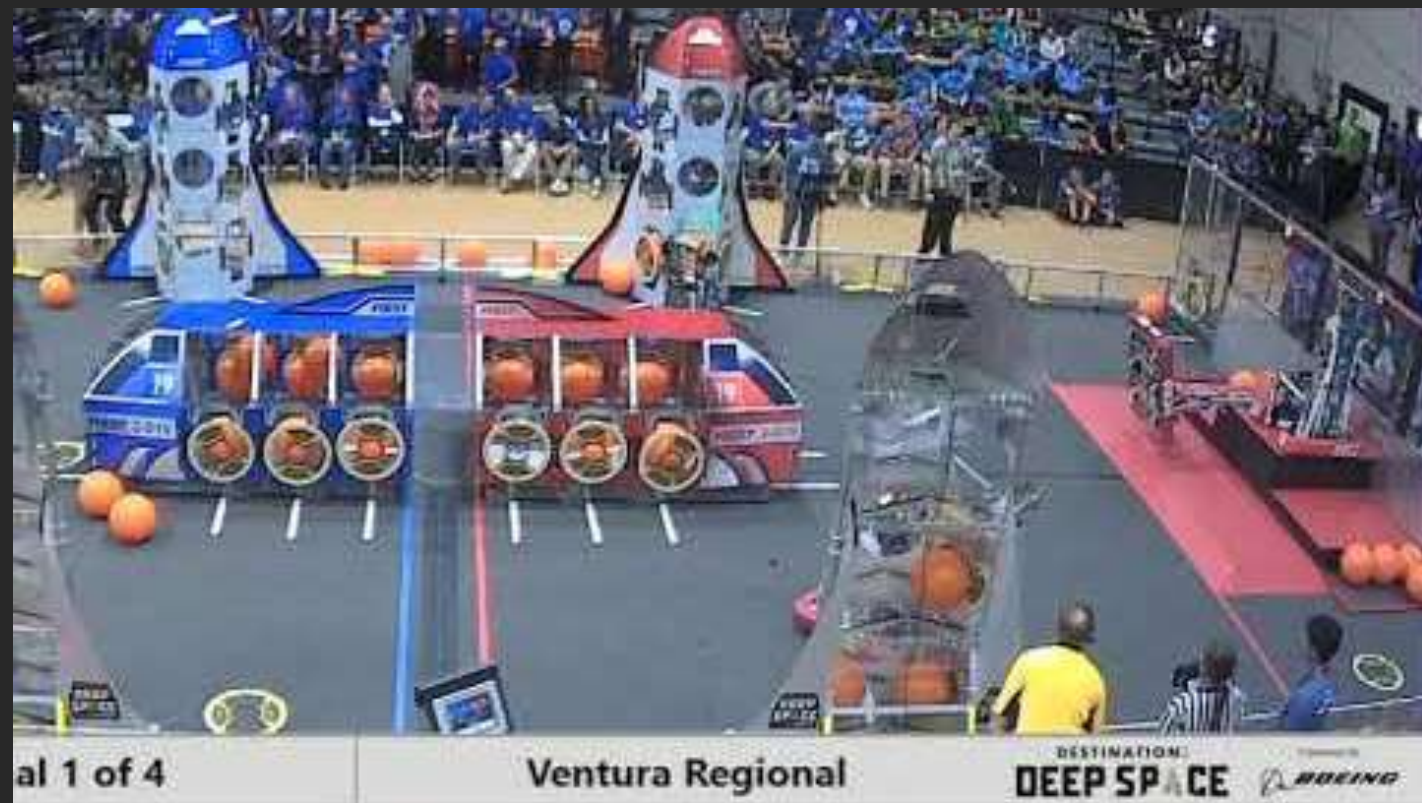
Completing the task together!

End Game Positions

Example



Sequence of end game



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Spot The Difference!

Vs

Quals

Elims

Action	Criteria	MATCH Points		Ranking Points
		AUTO	TELEOP	
AUTO mobility	For each ROBOT that breaks the BASE LINE vertical plane with their BUMPER by T=0	5		
	For every three (3) FUEL counted in the Low Efficiency GOAL by T=0	1	-	
	For every one (1) FUEL counted in the High Efficiency GOAL by T=0	+ 1 kPa		-
Pressure accumulation	For every nine (9) FUEL counted in the Low Efficiency GOAL by T=0		1	
	For every three (3) FUEL counted in the High Efficiency GOAL by T=0	-	+ 1 kPa	
	If ALLIANCE meets or exceeds a threshold pressure of 40 kPa		20 (Playoffs only)	1 (Quals only)
ROTOR engagement	For each ROTOR turning by period's T=0, that's not previously been scored	60	40	-
	If all four (4) ROTORS turning by T=0		100 (Playoffs only)	1 (Quals only)
Ready for Takeoff	For each TOUCHPAD triggered by a ROBOT at T=0		50	-
Win	ALLIANCE's final score exceeds their opponents'			2 (Quals only)
Tie	ALLIANCE's final score equals their opponents'			1 (Quals only)

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Lets Not Kill
The Coach...



Be **constructive** with your criticism!