

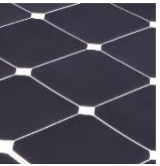


SOLAR CAR CONFERENCE | FEBRUARY 3-5, 2017 | OVERLAND PARK, KS



ON-THE-ROAD PROTOCOL

Brian Call & company
FEB 4, 2017



LIFE ON THE ROAD

Driving- Starts & Stops

- Route planning & navigation
- Caravan driving
- Human Resources- who does what when and why
- Turning left vs right
- Radio communications

Fluid Capacity- volatile and organic

- Human needs
- Internal combustion needs (papers- registration & insurance)

Newly appointed team member- aka Observer Care

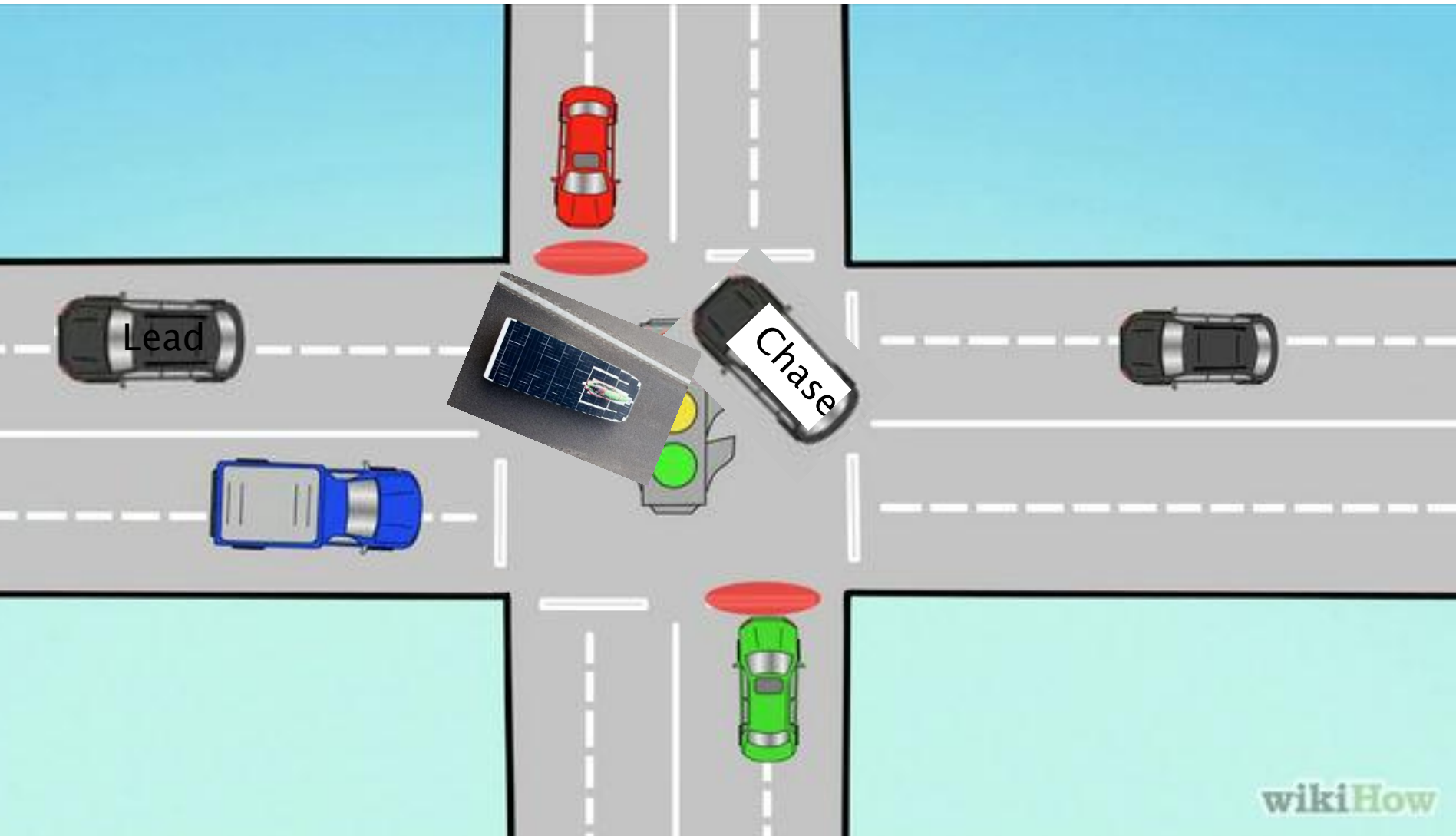
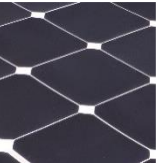
- Seating location
- Luggage transportation
- Feeding instructions
- Sleeping
- Rule interpretations



DRIVING THE ROUTE

Caravan driving

- Lead Solar Chase (lots and lots of traffic)
 - **Lead- navigation & warns of road hazards ahead**
 - **Chase- ~3 seconds behind solar car (no drafting)**
 - primary communicator with solar car driver
 - observer has full view of solar car
 - solar car and chase as one unit thru an intersection
 - **Lane changes (input from others)**
 - chase first to block any on coming traffic
 - solar car follows along with lead
 - try to follow a protocol & confirm with radio communications
 - **Turning (Principia)**
 - chase to block on coming traffic- shield the solar car





DRIVING THE ROUTE

Dealing with traffic

- **Letting traffic pass**

- lead can pull ahead and dump traffic without having to stop solar car
- traffic should pass chase & solar car as ONE unit

- **Pulling over to let large amounts of traffic pass**

- driving on shoulder- ends abruptly!
- Review route ahead- many towns are 4 lane or doing speed limit

- **Team passing**

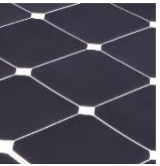
- trailing team to drop traffic first
- communicate using CB channel
- lead team to maintain target speed
 - increase in speed during passing will be noted by observer = penalty



DRIVING THE ROUTE

Pit Stops (planned and unplanned)

- **SAFETY FIRST**
 - flagger and cones out first
 - **Be an aggressive flagger!**
 - everyone has a hi-visibility vest on before exiting
- **Predetermined roles for everyone**
 - strategy – driver swap / tire change / battery inspection etc
- **Lead and chase**
 - drivers remain in the vehicle
- **Park lead and chase at an angle**
- **Safety checks before moving again**
 - blinkers/horn/ballast- everyone IN?
- **Major changes have to be re-inspected @ Check point/Stage**
 - spin out, smoke, impact with another object etc



RAYCE AGAINST THE CLOCK

Time on the clock

- Have a plan
- Know the timing rules
 - When can you start driving (forward progress)
 - When does your day end (thank you Adem)
 - Stage start vs Non-stage
 - Check point closing times
 - what if you miss the check point- drive thru?



HOW TO AVOID PENALTIES

Avoiding penalties (10.5)

- Pushing- 2 min for 15 seconds of pushing
 - How can this effects your final elapsed time
- Driving past end of day?
- Missing a check point- keep driving!
- Battery seals- observer documented
- Battery impound- 2 min for every min late
- Traffic back log- minimum of 10 min!
- Impeding the progress of another team- minimum 10 min



TYPICAL RAYCE DAY-MORNING

Sleep is over rated!

- 6:00 wake up (assuming you even went to sleep)
- 6:30 breakfast – **feed your observer!**
 - Can you camp where you stopped the night before?
 - Travel to charging location- doesn't have to be end of previous day
- 7:00 battery out of impound- charging!
 - strategy update- target speed
 - daily checks – electrical & mechanical
 - roles & responsibilities for all
- 9:00 Rayce time- driving **MUST** start from previous end point
- 12:00 lunch on the road – **feed your observer!**
- 3:00 mandatory driver swap (keep hydrated)



TYPICAL RAYCE DAY- EVENING

Sleep is over rated!

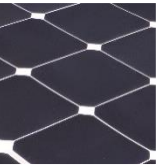
- 4:00 Strategy update -where to stop for the night
 - Scout ahead
 - Flex your time window when allowed
 - Get past a busy town?
 - Amenities for team and solar car
 - Sunset & Sunrise charging- lake nearby?
 - Sleeping arrangements
- 6:00 rayce day ends- recharge & daily checks
- **Feed your observer!**
- 8:00 battery impound –
 - Strategy-over view of the day, needs, improvements
- 10:00 fall asleep to the sound of dremel tools



OBSERVER 101

Assigned observers

- Treated just like any other team member
- Get choice of seats in chase
- Best view of solar car
- Prefer to have view of chase speedometer
- Able to hear driver communications
- Just another opinion when it comes to rayce rules
 - many are seasoned veterans and tell good stories
- Their luggage is carried by chase!
- Changed at check points and stage stops
- They are the eyes and ears for the officials
- They document all you do- read their logs before you sign!



FLUID CAPACITY

Non solar cars need fluids!

- Support vehicle
 - Where to get fuel during check point?
 - Check other vitals- helps to know your vehicle
 - Air pressure
 - Insurance & registration papers

- Human needs
 - Restrooms
 - Team members left behind
 - Food & water-
 - Keep hydrated