



BUGGY ALUMNI ASSOCIATION

2017 Raceday Preview

Welcome to the 2017 Sweepstakes season! We are excited to present this year's Raceday Preview, full of the insider information you can't get anywhere else. Thank you for being a member of Buggy Alumni Association and financially supporting us in our mission to further the sport we all love and keep coming back for! In recent years, the top spot in the men's heats have been fairly predictable. SDC has run away with first while CIA, PiKA, Fringe, and Spirit battle it out for second. This trend has been established over the last 5 years, with SDC dominating the men's heats, sending multiple teams on to day 2, and consistently placing every year, sometimes taking first by as much as 4 or 5 seconds over the second place team. At this point, the men's races are pretty much decided at registration. Despite the basic excitement we all have for buggy in general, there has not been much room for nail-biting photo finishes in the men's heats.

But there is hope! The growing field of women's races continues to be the place to look for awesome upsets in the sport of buggy. CIA has been the #1 women's team both in 2015 and 2016, but SDC has their sights set on the big trophy. With their 2016 preliminary time of 2:26.56, SDC women's A had nearly 8 seconds on the second place CIA women's A. SDC's missed pushbar blew the whole thing wide open, allowing CIA, Fringe and Spirit to roll up to the top 3 slots. If the previous several years have been any indicator, the women's heats will be the races to watch this year.

The increase in competition amongst the women's teams has opened the door for a powerful move for equality in sweepstakes. This year, ten women's teams will advance to finals, and six of them will receive trophies for their achievements. This move brings the prize pool in line with what the Men's teams have been getting for more than a decade. The last time the race format was changed was in 2013, when the number of Women's finals heats was increased from six to eight total and the number of prizes awarded was increased from three to four for women's teams, though still short of the six trophies given out to men's teams. But the number of women's teams participating kept growing and in 2016 24 Men's teams competed and 23 Women's teams competed. With nearly equal participation, this move by Sweepstakes could not have come a moment too soon. Next up, non-human participants, we're looking at you Robobuggy and Atlas.

Thanks so much for reading and donating! See you on the course!

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2016 Raceday Results

2016 was a return to form for SDC, turning around quickly from their major downturn in form during the prior 2 years. With newly paved roads, the Dynasty attempted to set course records in both the men's and women's races. And while they succeeded in setting a new men's record, they fell an arm length short and DQ'd their women's A team. We experienced finals for a second straight year after 4 years of 1 day of racing only. Pika missed their first raceday in history after receiving sanctions from the school. They lent their buggies and pushers to CMU Fishing Club for a 1 off year competing as "Fish". A new name did not help their results though as they DQ'd their Men's a for the 2nd straight year. The new roads led to amazing free roll times and rollouts on hill 3, leaving many pushers running after a flying buggy. This year looks to be equally as fast as last year with near ideal road conditions only being changed by a poor patch in the chute due to pipe work under the road. Will this lead to more spins or slides in the chute come raceday? We will have to wait and see.

Men

	Team	Buggy	Time	
1	SDC A	Malice	2:03.1	
2	SDC B	Avarice	2:08.06	
3	CIA A	Equinox	2:08.88	
4	Fringe A	Bissa	2:13.74	
5	CIA B	Icarus	2:16.63	
6	SDC C	Bane	2:19.62	
7	Fringe C	Beacon	2:20.32	
8	Spirit A	Inviscid	2:11.75	3/4 Trans
9	Apex A	Ember	2:21.67	Pushbar
10	Sig Ep B	Hydra		DNF
11	Spirit C	Seraph	2:22.07	
12	SAE A	Lucy	2:23.92	
13	Phi Delt	Perun	2:26.18	
14	Sig Nu A	Krait	2:28.28	
15	SDC D	Havoc	2:28.38	
16	CIA C	Tempest	2:31.24	
17	Apex B	Phoenix	2:32.22	
18	Fringe D	Bolt	2:32.72	
19	Spirit D	Fuko	2:33.16	
20	AEPI A	Kamikaze	2:33.5	
21	CIA D	Impulse	2:41.55	
DQ	PiKA A	Cliodhna	2:12.63	
DQ	Fringe B	Boson	2:18.68	
DNF	Sig Ep A	Kraken		
DNF	Spirit B	Zuke		

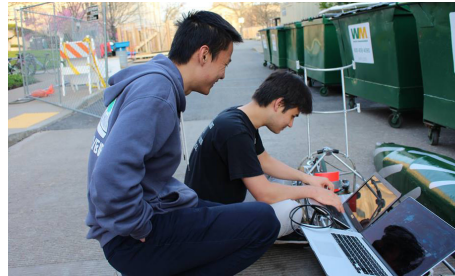
Women

	Team	Buggy	Time	
1	CIA A	Equinox	2:31.06	
2	Fringe A	Bissa	2:35.93	
3	Spirit A	Inviscid	2:37.71	
4	SDC B	Avarice	2:39.69	
5	PiKA A	Cliodhna	2:42.35	
6	SDC C	Bane	2:45.30	
7	CIA B	Icarus	2:51.36	
8	SDC A	Malice	2:25.8	Pushbar
9	Apex A	Ember	2:49.72	
10	Fringe B	Boson	2:51.34	
11	Phi Delt	Perun	2:56.07	
12	SDC D	Havoc	3:01.30	
13	SAE A	Lucy	3:04.59	
14	Fringe C	Beacon	3:04.78	
15	AEPI A	Kamikaze	3:09.86	
DQ	Sig Ep A	Kraken	2:45.30	DNF
DQ	CIA C	Tempest	3:13.36	Drop Test
DQ	CIA D	Orca	3:15.36	Drop Test
DQ	Fringe D	Bolt	3:17.89	Loss Mass
Dnf	Spirit B	Zuke		Spin
Dnf	Spirit C	Seraph		Spin
Dns	Apex B	Phoenix		
Dns	Sig Nu A	Krait		

Atlas Buggy

Best result of last 5: Men _st (), Women _st ()

Org records: Men _:_._(), Women _:_._()



The honor of the first roll of the 2016-2017 season went to Transistor, a product of the Robobuggy program in Robotics Club. They formally joined the roll order in Spring 2017, rolling with the other human teams. They had unplanned stops, just like the human teams. On April 2nd, Transistor deployed its brakes in the chute, coming to a complete stop and thoroughly confusing its meatbag handlers. They also had a crash into the sidewalk by Westinghouse during the spring rolls, which (in a first for buggy) they remotely 'uncrashed' and continued on. On the weekend before Truck Weekend, they completed two full autonomous rolls, moving at a relatively slow speed due to meandering path choices. However, they cleared the Chute successfully - one small step for buggy and one giant leap for buggy-kind. They will present their impressive technology at the Design Showcase, so look for them there!

Quasar'04



Driven by Numbers

Robo Buggy

Best result of last 5: Men _st (), Women _st ()

Org records: Men _:_._. (), Women _:_._. ()



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Transistor '15



Driven by Imagination

Apex

Best result of last 5: Men 6th (2015), Women 9th (2016)

Org records: Men 2:20.40 (2015), Women 2:49.72 (2016)



Apex returned one driver and debuted two new drivers on the first day of fall rolls, and was able to slowly progress to bag-free rolling over the course of fall the season. Surprisingly, despite their surplus of drivers, they only rolled Phoenix during the fall season, and Ember remained unseen. In the spirit of buggy camaraderie, Apex generously shared their follow car with CIA when they lacked one of their own. The only incident in the fall was a loss of the rear hatch on the first day of rolls, but otherwise they rolled cleanly through the fall getting plenty of rolls for all three drivers.

Spring saw the return of Ember to the course, giving Apex two buggies for three drivers. That ratio was evened out when Apex added a third buggy known only to this point as "Kyle" (we expect a fire themed name by design comp). "Kyle" is Apex's first build since 2014's Ember, but if it were not for the overly large exterior, you would not know it. The buggy has been rolling as well as, if not slightly faster than, Phoenix and reportedly weighs half of its older brother. With Ember's unreliability and recent lack of pace, the Apex members are understandably excited about their new buggy. To prevent a DQ on Raceday though, they will have to work out a better attachment solution for their hatches, since the buggy has shed its rear hatch on nearly every roll thus far. Hatch problems are an unfortunate theme for Apex, who also has them on Ember and Phoenix.

Apex had been very light on pushers in the spring, only rolling one or two buggies on any given go-around. That all changed come Truck Weekend where they were able to roll all three buggies per roll with speed. The team is again relying on their inexperienced but fast soccer team pushers, who in the last 3 years have delivered poor transitions and two pushbar DQs. This year they have added a few members from the Ultimate Frisbee Team as well to create depth, and look to add a C team. A team insider has let us know they are returning their Hill 1 and Hill 5 pushers from 2015's impressive Women's team and hope to compete for a trophy in both the Men's and Women's competition.

Firefly '17



Driven by Samantha Wong

Ember '14



Driven by Kami Chin

Phoenix '13



Driven by Lena Vlahakis

CIA

Carnegie Involvement Association

Best result of last 5: Men 3rd (2016), Women 1st (2016)

Org records: Men 2:08.88 (2016), Women 2:31.06 (2016)



CIA continues to demonstrate their significant manpower, rolling five buggies with three new drivers on the first day of fall rolls. It is hard to believe that a mere eight years ago this organization barely had enough people to keep buggies on the course and making it to day two of races was a pipedream. In another show of strength, CIA was heating Equinox's wheels on the second weekend of fall rolls. Because hey, why not? Their only weakness so far appears to be a lack of a follow car, which they remedied by rolling with Apex and/or renting a Zipcar.

CIA continued with their build tradition and will be racing yet another new buggy this Carnival. Emperor is a sleek forward trike monocoque sporting larger-than-average rear wheels. Theoretically, bigger wheels allow for a smoother ride, but based on the sound coming from Emperor on the first two weekends of rolls, they might as well have been rolling on hexagons. Fortunately by Truck Weekend, Emperor was making its way around the course with more speed and less noise. Presently CIA's #23 is wallpapered with penguin pictures and rumor has it that the team does not have time for a final paint job before Design Competition.

The agents made it through both the fall and spring seasons with few incidents and no major catastrophes. Tempest and Orca each took a spin in the Chute, but buggies and drivers were fine. Despite the spins, CIA is at the top of the pack in terms of Freeroll speed. They routinely fall in line with PiKA, Fringe, and Spirit while importantly maintaining much of their momentum through the Chute. CIA, along with many of the speediest teams, will be chasing SDC for that first place spot.

Emperor '17



Driven by Emily Wong

Tempest '16



Driven by Kady Yip

Equinox '15



Driven by Ariana Daly

Impulse '13



Driven by Yushuan Peng

Orca '12



Driven by Victoria Liang

Fringe

On The Edge

Best result of last 5: Men 2nd (2012), Women 2nd (2016)

Org records: Men 2:05.08 (2011), Women 2:34.70 (2001)



Fringe got off to a rocky start on the first day of rolls, when Bissa grazed the curb near the Panther Hollow Bridge transition at low speed. Reportedly, the incident may have been caused by a steering issue. Otherwise, they rolled quickly and efficiently, with multi-window rollouts by the end of the first day. Fringe rolled through the rest of the fall and through the spring in much the same fashion, with the weekly rolls reports describing their buggies as “smooth, quiet, and quick around the course.” The team was also the first to introduce a new buggy in the spring. True to form, NB17 was off bags quickly and speeding around the course in a ninja-like fashion. The new buggy is another reverse trike and shares a similar profile to the existing fleet. By the second weekend of spring rolls, Fringe was attempting pass tests, but had a rough time of it due to the Hill 2 pusher underestimating the Freeroll speeds.

Fringe is one of the most consistent organizations rolling in the last 10 years [Editor’s Note: seriously, this is the most boring team to write up - but that’s good!] In the last several years they have sent multiple men’s and women’s teams to Day 2, but they haven’t clinched a first place trophy since 2011. From our timing data this year, they remain at the top of the pack with CIA, Spirit and PiKA, but trail SDC in speed. Their consistency and efficiency have made Fringe an anchor in Buggy as a sport and is undoubtedly one of their greatest strengths on Raceday. In the (totally useless) coolest follow car awards, they trail only SigEp in style, with an SUV with custom ‘BUGGYCMU’ plates.

Blueshift '17



Driven by Amy Chen

Boson '16



Driven by Madison Scott

Bolt '14



Driven by Victoria Ye

Beacon '13



Driven by Helen Kim

Bissa '12



Driven by Nina Prakash

Phi Delt

Phi Delta Theta

Best result of last 5: Men 13th (2:26.18), Women 11th (2:56.07)

Org records: Men 2:26.18 (2016), Women 2:56.07 (2016)



Phi Delta Theta first colonized at CMU in October of 2013 with an impressive first pledge class of over 40 members. Quickly they set their sights on campus involvement, competing in Booth and Greek Sing in Spring 2014 and adding buggy in 2015. After competing in 2015 with Perun, a loaner buggy from the former KDR team, they returned in 2016 with plans to construct their own buggy. While those plans did not come to fruition, they were able to keep Perun and use their experience from their first year to cut 20 seconds off their Men's A team and an incredible 2 minutes and 13 seconds off their Women's A team.

This year they set their sights high: complete their own buggy build and make Day 2 for the first time. While it took longer than expected, Phi Delt brought out their first buggy Argo in time for the second-to-last weekend of rolls. Phi Delt went all in on this build with a sleek teardrop shape and Ackerman steering out front. It doesn't quite have the finish quality of the top teams, but is overall an impressive-looking build. They haven't yet figured out how to extract the desired speed from the buggy, but hopefully they can find something before Raceday.

As their house grows, so too does their fleet of available pushers. Speaking with their former chairman and founder, Alex Russell, Phi Delt looks to have a stronger push team than last year. He believes the team could compete for second day with these new pushers, if they can get Argo rolling at a more competitive pace. However, for Phi Delt, the most important thing will be building momentum for the program as Alex will graduate this year. Luckily, the house is rallying around the new build and with more Mechanical Engineers in the house than ever before, he is certain the team will continue to grow in the coming years.

Argo '17



Driven by Sarah Deluty



After competing as the independent Fishing Club last Raceday, PiKA returned to the course as a Greek team this fall. By their second roll around, they had removed the bags and piled on the speed, losing Raptor's hatch in the process. By the second weekend of fall rolls, there was some fishtailing in the Chute, as well as creative flagging positions at the first transition. The team's creativity extended to their drivers, who took a variety of lines through the Chute both in the fall and spring. We speculate that the drivers are practicing for close races come Carnival, but it could also be a means to keep this critical aspect of the race a secret. Unfortunately many of the experimental lines hamper PiKA's typical speed around the course. As the spring season continued, PiKA released their buggies into the Freeroll closer and closer together. This was either due to an extreme lack of patience or as more practice for tight heats on Raceday.

We don't have much in the way of hard timing data for PiKA, but when their drivers take an optimal chute line, their buggies are flying. The team is clearly at the top of the pack in terms of freeroll speed, but may have some difficulties maintaining it through the Chute. The team has also suffered heartbreak in recent years, after putting up great times only to be DQ'd for relatively small mistakes. Reportedly, the Brothers rushed SDC's hill 1 pusher from 2016's record setting year, adding a second King of the Hill winner to their roster. If PiKA can keep their hands on the push bars and find that sweet spot in the chute, they will be a contender for the top prizes this year.

Clionha '16



Driver: Victoria Van Benschoten

Banshee '13



Driven by Anna Zhang

Raptor '11



Driven by Sera Lim

SAE

Sigma Alpha Epsilon

Best result of last 5: Men 7th (2015), Women 7th (2015)
Org records: Men 2:14.74 (1991), Women 2:54.50 (2010)



SAE was a minimal presence at fall rolls, only appearing one weekend with the venerable Lucy. Their most noteworthy event that day was pairing with SigEp in order to produce sufficient manpower at rolls. The brothers returned a veteran driver this year in Hee Jun Kim, giving them an experienced presence inside the buggy. Interestingly, the excessive negative camber seen on Lucy in prior years has been corrected, but overly so to where the buggy is now sporting positive camber on the front wheels.

SAE were seen more often in the spring, and benefited from the experience of their veteran driver. She drove clean lines all spring through the now bumpy chute, minimizing speed loss and showing impressive rollouts for their lack of speed into the chute. Unfortunately, even with the updated steering, their freeroll speed is still well behind the top teams like PiKA, SDC and Fringe. This will likely be their downfall, as the team continues to look strong on the front hills, but will likely fade from competition as they hit the free roll. Their backhills are more of an unknown as we haven't seen them pushing enough this year. Given their pusher's performance during last year's races, SAE will likely be right on the borderline of a Day 2 once again. With some lucky DQ's, SAE could be a surprise ringer and might sneak their way to trophy!

Lucy '14



Driven by Hee Jun Kim



SDC started off in expected style this fall: smooth, quick, quiet, and efficient, removing all of their bags by the first day of rolls, and already starting on some impressive rollouts. The only excitement they produced all fall was the second weekend, as a new driver in Vice missed the transition flag and headed up the path to Phipps. She eventually stopped on the grass, and was (interestingly) allowed back on the road to continue her roll. Otherwise, SDC was one of the fastest and least comment worthy teams on the course throughout the fall.

In the spring, SDC debuted a matching camera for each buggy, which led observers to question what on earth they would do with all that data. They clearly refined lines for each buggy driver/pair, and the main comments over the season were on their speed and general team efficiency. SDC did have a big surprise for us this Spring, returning Rage to the course with all intents on rolling it this Raceday. Rage will be the oldest buggy on the course, having first rolled in 1996 and now outdating the current class of sophomores. While SDC is fast and stable, it's interesting to note that only two of the current six active buggies were built by current team members - Malice, Avarice, Bane and Rage are all pre-2012.

While SDC Men's teams have been victorious in 5 straight racedays, SDC women's teams have lost out to CIA over the past 2 years. Keep an eye on SDC Women's teams, as they will be out for blood this year and as they try to take the top spot back after handing CIA a victory last year on a pushbar DQ. We expect SDC to continue as a dominant force on the course come Raceday, with multiple trophies and a possible sweep of Men's and Women's races.

Havoc '16



Driven by Maggie Lin

Bane '11



Driven by Kyoko Inagawa

Avarice '10



Driven by Elizabeth Ji

Malice '09



Driven by Anna Black

Rage '96



Driven by Tricia Chen

Sig Ep

Sigma Phi Epsilon

Best result of last 5: Men 2nd (2015), Women 3rd (2012)
Org records: Men 2:08.55 (2009), Women 2:33.95 (2009)



SigEp had a fairly uneventful fall, with their only reported incident the loss of a GoPro on one roll. Later rolls showed a clear investment in a new supply of gaffer's tape. Due to reduced manpower, SigEp and SAE rolled together one weekend, and earned the title "Sigma Squad". Sadly, no Pokémon jokes were made. Also good to note, Barracuda returned to the course after extensive repairs from a hill 2 crash in fall 2015. Barracuda was also sporting a borrowed hatch from its long forgotten twin Peregrine (2010 build) after a 2015 Raceday crash destroyed the original hatch. The new windshield definitely gives the buggy a different look, but it rolls the same as the Barracuda that has almost delivered victory far too many times.

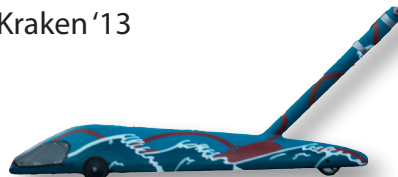
The team missed the beginning of spring rolls but were back in action by the second weekend with a primed Barracuda, and were one of the few Greek organizations to get some rolls the same weekend as Greek Sing (SigEp and KKG took home the doubles trophy). By the weekend before Truck, SigEp introduced a neon pink/graffitied buggy that has been christened "Beyonce". You do you, SigEp. Despite her namesake, buggy Bey was not looking so hot at her debut as her front hatch was held on with duct tape and a large hole over the driver's head was covered with cardboard. SigEp created a taller hatch that could fit a driver's head and helmet for Truck Weekend, and had Beyonce looking and rolling much better. SigEp always has the pushers to be competitive on Raceday, but they have to keep their wheels on the buggies and pass drops if they want to take home any hardware. Regardless of their Raceday performance, the team won the "coolest follow car" award, as their lovely Mazda Miata was the most stylish follow car seen on the course this year.

Beyonce '17



Driven by Nazli Uzgur

Kraken '13



Driven by Madeline Finn

Barracuda '09



Driven by Sophie Halpern



This year SigNu was hoping for a turnaround. Early in the 2016 Fall season, a SigNu student noted to the BAA that they were interested in 'rekindling their old buggy legacy' and want to 'drum up enthusiasm in their fraternity.' Their self-proclaimed goals for 2017 were to be a competitive team and qualify for finals on Raceday. It was also noted that their alumni would be watching them closely, promising a set of ESP racing wheels, and maybe funding for a lighter shell, if the young 'uns were deemed worthy.

SigNu showed up to rolls on the first weekend, rolling fast and without drama. Despite that initial excitement, the commitment to rolls just does not seem to be there for this group of brothers. After their first day at fall rolls, they went back into hibernation until Mini Raceday, when they made a dramatic reappearance. During a roll, their transition flagger threw an accidental stop flag and caused Krait to spin to a stop. Although we were hopeful for a better start to the spring, SigNu did not come out for rolls until the weekend before truck. Fortunately, veteran driver Raisa Chowdhury needed only 5 rolls and a pass test to qualify, which she got in with a couple rolls to spare.

While Krait is rolling well, push talent is again going to determine their fortunes. Looking back on Raceday 2016, although Krait put in a decent roll, SigNu's lack of push talent left them short of day two with a time of 2:28. Their buggy-wheel combo has a frustrating amount of untapped potential, rolling (at its fastest) a 2:17.10 in 2009. This is the house's fastest time in the last 9 years by more than 2 seconds. Since 2009, SigNu Racedays have been plagued with spins, crashes, and DQs, only completing the course in three of the last six years. However, in the last two years they have completed the course, albeit with uncompetitive times. The good news, though, is their returning driver Raisa Chowdhury was the driver for both of those races. While we expect them to finish the course for the 3rd year, it will take a much-improved push roster to come close to tasting day two glory.

Bungaris Krait '09



Driven by Raisa Chowdhury



Spirit gave themselves a gradual but smooth start into the year. All three buggies were heavily bagged for the first two days of rolls, and there was initially some trouble clearing the chute. However, they soon sped up and were passing each other on the backhills. On the first day of spring, Spirit was a bit noisier than expected, suggesting perhaps some hardware experimentation. They also took some interesting lines, going particularly wide into the chute. This led to a few incidents, notably Zuke spinning after nearly hitting the outer bales, and then a few weeks later shearing off part of their rear axle on the outer bales. However, the axle was quickly replaced for the next day of rolls. If they can clear the chute cleanly, their killer push teams will likely make Spirit a force to be reckoned with this Raceday.

During Raceday 2016, Spirit's B teams (both men's and women's) were plagued by spins during the prelims, though surprisingly, their faster A teams held on thanks to some amazing driving from now graduated Sha-leena Jeeawoody driving Inviscid, their most recent build. Both A teams managed to put up respectable times, and if not for an unfortunate 3/4 DQ on their men's side, both teams would have gained a trophy, but only their women managed to hold on to their 3rd place. Going into this year, Spirit has a very similar composition with 2 Women's and 4 men's teams, and will be fighting that spinning tendency again. With solid looking pushers and chute speeds, we are looking for them to repeat and improve on their times from last year for another spectacular finish. Though, like last year, that performance may not reach beyond their A teams.

Inviscid '15



Driven by Bei Chen Liu

Zuke '11



Driven by Diamond Moody

Kingpin '02



Driven by Rebecca Kang

Preliminary Heats for Friday, April 21

Women

		Lane 1	Lane 2	Lane 3
8:05	Timing		Robo Buggy	
8:20	Heat 1	Fringe B	SDC D	
8:28	Heat 2	CIA C	Spirit B	
8:36	Heat 3	Apex A	CIA D	
8:44	Heat 4	Sig Ep A	Fringe D	
8:52	Heat 5	PiKA A	CIA B	
9:00	Heat 6	Spirit A	Apex B	
9:08	Heat 7	SDC B	SDC C	
9:16	Heat 8	Fringe A	Sig Ep B	Apex C
9:24	Heat 9	CIA A	Fringe C	
9:32	Heat 10	SDC A	SAE A	Phi Delt A
9:40	Interview			
9:47	Exhibition		Atlas Buggy	
9:54	Break			

Men

		Lane 1	Lane 2	Lane 3
9:47 AM	Exhibition		Atlas Buggy	
10:02 AM	Heat 1	Apex A	PiKA C	
10:10 AM	Heat 2	Fringe B	SigEp C	
10:18 AM	Heat 3	Spirit B	SDC D	
10:26 AM	Heat 4	CIA B	Apex B	CIA D
10:34 AM	Heat 5	Sig Ep B	Phi Delt A	
10:42 AM	Heat 6	SDC B	Fringe C	
10:50 AM	Heat 7	Spirit A	Apex C	CIA C
10:58 AM	Heat 8	Fringe A	SDC C	
11:06 AM	Heat 9	SigEp A	SigNu A	Fringe D
11:14 AM	Heat 10	PiKA A	SAE A	
11:22 AM	Heat 11	CIA A	Spirit C	
11:30 AM	Heat 12	SDC A	PiKA B	
11:38 AM	Re Rolls			

Raceday Predictions

With a beautiful day of rolls on Truck Weekend Saturday, all the teams put up much cleaner freerolls and faster push times than last year's snowy final day of practice, giving us some great data to analyze. Here's how the teams are looking this year:

Apex - They're rolling slow, but still alive.

CIA - They are putting up respectable freeroll times, and have very determined pushers, but haven't made the next breakthrough they need.

Fringe - "Increasingly average."

PhiDelt - It looks like KDR took Perun away. They seem to have focused on building their first buggy rather than getting any faster.

PiKA - They're top-tier in speed, and serious about racing. PiKA is back to classic form.

SAE - They have a very fast Hill 1 this year, but are still rolling at a leisurely pace.

SDC - Fast, smooth, and consistent, they are a well-oiled machine firing on all cylinders.

SigEp - They know their potential, but lack the intensity to realize it.

SigNu - Speaking of unrealized potential...

Spirit - They're putting up top-tier freeroll times, but can be squirrely in the chute; seem slower up the front hills.

The Women's races should be SDC's if they avoid any mistakes. CIA will be trying to be trying to join SDC and PiKA as only the third org to ever push below 2:30. Third through sixth will probably be a shootout, with only a couple seconds separating several teams. The volatile nature of Women's times, though, means it could be anyone's race. In Men's, it looks like we'll have PiKA and SDC gunning for first, with CIA and Spirit aspiring for an upset victory (or at least a sub-2:10 time). SigEp and Fringe will probably be fighting over the sixth place trophy.

Men

1. SDC A
2. PiKA A
3. CIA A
4. SDC B
5. Spirit A
6. SigEp A
7. Fringe A
8. CIA B
9. PiKA B
10. Spirit B

Women

1. SDC A
2. CIA A
3. Spirit A
4. SDC B
5. Fringe A
6. PiKA A
7. SDC C
8. SigEp A
9. Apex A
10. PhiDelt

Meet an Alumni: Adam McCue



In our Raceday preview we like to feature alumni who have made contributions to Buggy. This year, we interviewed Adam McCue, well-known around the course from 2003 to 2007 as a gregarious KDR. He was chair of their program, and got himself so deeply involved that it was suggested by the administration that he consider his priorities. So he considered, and became safety chair. He did eventually return from this academic vacation to graduate in 2007 (and serve as head judge that year at Raceday).

How did you get started with Buggy in the first place? What was your first role on a team?

The first time I touched a buggy — ever — was on Raceday 2003, when I pushed Hill 2 for KDR B. We were up against PiKA B and I looked downright glacial in comparison. Please don't watch the video. [Editor's Note: it's available here: <http://cmubuggy.org/video/2003prelimism7> or here: <https://www.youtube.com/watch?v=Zs-FaH5B1-M>]

The fraternity as a whole didn't do very well that Raceday, which I didn't understand because we were great at everything. Being an enthusiastic pledge, I thought that I could help turn around the buggy program by volunteering a couple hours a week. I vastly underestimated that time commitment, and the rest is history!

What's your favorite Buggy memory?

Without question, Raceday 2005 when KDR broke 5 house records over two days. I am so proud to have been a part of that team [Editor's Note: He was the chair!] and to have seen all the time, dedication, and sacrifice pay off for so many deserving people.

Second favorite was as Safety Chair in 2006 when I was invited into a friendly team's truck after the races to discover that they were running extension cords solely to power a margarita machine.

What's the craziest thing you did for Buggy?

When I was Safety Chair I broke my foot supervising push practice, the irony of which is not lost on me. I was told I wouldn't be able to walk on Raceday unless got a fairly uncommon elective surgery, which is why I now set off metal detectors at airports.



What's the best thing you learned from Buggy?

How to use power tools, how to lift weights, and how to function on very little sleep. I recommend learning them all separately before attempting to combine them.

Did Buggy influence or help your career?

Influenced? Undoubtedly. Helped? Unless they ask for my GPA, absolutely.

I do product management for a startup, and it's amazing how transitive the skills are. Leading a team, making decisions based on data instead of emotions, and picking the practical and effective solution over fun but time-consuming alternatives were all skills I learned the hard way through Buggy.

What was the stupidest moment you had in Buggy?

This actually happened: we kept burning wheels, so we thought a good foolproof solution would be to solder together a small radiator, fill it with boiling-hot antifreeze, and pump it around with a drill motor. Here's a pro-tip: this is not a good way to heat wheels, and a worse way to spend your spring break. Do not do this.

Buggy Timing

Timing Technologies

Starting last year, the BAA has been working on a variety of freeroll timing systems, each with different capabilities and purposes. There are 4 systems that have been put through their paces this year with all the useable data being uploaded to our site:

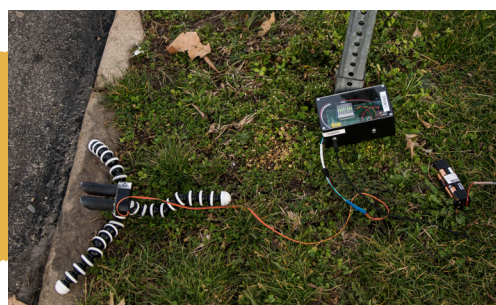
1. Last year's 3 laser/receiver system which measures the time between beam breaks and calculates speed with known laser separation. Developed by Ben Brown, this system has been further improved for this year and will again be used during the races.
2. A barcode reader version of last year's system has been introduced which reads a reflector pattern on each buggy and calculates speed based on known strip length and detection duration. Unique patterns encode the buggy to the system. Also developed by Ben Brown, this system has been working well, but few teams are willing to stick reflective to their buggies at this point.
3. A wireless station system which records split times through the freeroll via synced GPS clocks. Developed by Mark Estes, this system still has some lagging issues limiting its full capabilities, though we may see some limited use during Raceday to gather Hill 2 shoves.
4. High-speed video of each buggy where frames are counted between measured markers along the road requiring manual post-processing. Operated by Shafeeq Sinnamohideen, the camera measurements are impractical for Raceday due to the crowds and will stay reserved for rolls.

Results

Despite the volume of information in the data, there are still many unknowns. For example, we don't know how hard each team is going, and it's difficult to track Men's vs. Women's pushes. Still, by looking at the days when everybody is presumably trying their hardest - Truck Weekend, Mini-Raceday & Raceday, there are a few things that can be said:

Most competitive teams (SDC, Fringe, CIA, PiKA, Spirit, and on occasion SigEp) are overall within 1 mph of the top. This implies that these teams are pretty close in total drag and show a closing of the overall technology gap. This also implies that teams like SDC, Fringe, and PiKA, who look to apply more aerodynamic details aren't seeing as much of a benefit. Despite the top teams going into the chute at about the same speed, there's a wide difference in speed coming out. CIA & SDC occupy most of the top spots on the chute-speed leader-board. Spirit and Fringe are often close but have wider variation.

The repaved freeroll in 2016 allowed teams to pick the chute line they wanted and they seem to have held those new lines this year. SDC and PiKA take the traditional route making the widest possible (lowest g-force) turn. CIA looks to have adopted what is usually the passing line - head directly towards the apex, then making a hard but brief turn. Spirit & Fringe are somewhere in between. All of these approaches (when done well) result in the same exit speeds. The passing line is the shortest distance, but usually costs a lot of speed from the hard turn. Surprisingly CIA manages the tight line without paying much price in velocity. SDC, PiKA, and Spirit can't seem to manage the tight turn without sliding and losing speed. Fringe and SigEp also lose speed when turning tightly, but do not make as obvious of slides.



Sweepstakes 2017 Schedule of Events

Wednesday, April 19

8:00 pm WRCT Pre Raceday Broadcast - <<http://www.wrct.org/>> 88.3 FM Pittsburgh
Listen in and tweet or message us live as we talk about the upcoming races.



Thursday, April 20

10:00 am Design Competition (*closed event*) - Weigand Gymnasium, UC

12:00 pm Buggy Showcase - Weigand Gymnasium
Come view the latest buggy designs, talk with the teams, view Raceday footage from previous years, and see the vintage buggy display sponsored by Buggy Alumni Association. There will also be a Q&A on the current state of robotic buggies with the Robobuggy and Atlas teams.
Proudly sponsored by GoDaddy.

7:00 pm BAA Welcome Event - Hough's Brew Pub 563 Greenfield Ave, Pittsburgh, PA 15207
Join the BAA for a casual "welcome back to Pittsburgh" event to help kick-start the weekend. Meet us at Hough's Tap Room and Brew Pub for some reminiscing about our buggy days and for some debate on who will be the lead contenders this year. Oh, and beer. They serve beer there too.



Friday, April 21

8am - 12pm Sweepstakes Prelim Races - Schenley Park Course
Proudly sponsored by Uber Advanced Technologies Center, GoDaddy and #1 Cochran.

12:30pm Buggy Alumni Association Luncheon Gathering - Donner Ditch Tent
This year we are trying something new: grab some food at the All-Campus BBQ, then join us in our reserved space in the Donner Ditch. It's the perfect time to analyze every detail from the prelim races.

1:30 pm The History of Buggy: Showcasing the class of 1992 - Danforth Conference Room University Center
Come relive the excitement of Buggy 1992 from Buggy Alumni Association Archivist and Buggy Guru, Tom Wood (E 1974).Registration Required/No Event Fee



Saturday, April 22

8:00 am Sweepstakes Final Races & Exhibitions - Schenley Park Course

4:00 pm - 7:00 pm BAA Post Race Happy Hour - The Porch in Schenley Plaza
Join us for some drinks and camaraderie after Finals, at the Porch in Schenley Plaza!

4:30pm - Awards Ceremony - Tennis Courts

See you on the hills.