IHC Questions Plan's Viability for Next Year

By KEVIN BARTZ

In a vote that will make or break the Avery Council's bid to open the house to freshmen, the Student Housing Committee is expected hand down a recommendation after a private meeting today.

Although the majority faculty SHC is seen as sympathetic to the idea, a compromise measure that would implement the plan in 2005 instead of 2004 is gaining steam among moderates on both sides and may be a wild card in balloting.

The month-old Avery debate bubbled to a climax this week when the Interhouse Commit­tee unscrambled its case against the measure to the SHC at a public meeting Wednesday.

"I think there was some pro­ductive discussion," said IHC Chair Kim Popendorf '06. "I'm glad that there were people who were really listening."

In its talk, the IHC listed four long-term concerns along with a battery of logistical questions, all stressing their belief that Avery’s plan is premature.

"There’s just no way this can be beneficially implemented by next year," said Popendorf. "It could be detrimental to student life if we don’t first look at all the issues."

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Astronomers Detect Most Distant Planetoid Yet 8 Billion Miles Away

By ROBERT TINDOL

PASADENA, Calif.—A planetoid more than eight billion miles from Earth has been discovered by researchers led by a scientist at the California Institute of Technology. The new planetoid is more than three times the distance of Pluto, making it by far the most distant body known in the solar system.

The planetoid was well beyond the recently discovered Kuiper belt and is likely the first detection of the long-hypothesized Oort cloud. With a size approximately three-quarters that of Pluto, it is very likely the largest object found in the solar system since the discovery of Pluto in 1930.

At this extreme distance from the sun, very little sunlight reaches the planetoid and the temperature never rises above a frigid 400 degrees below zero Fahrenheit, making it the coldest known location in the solar system.

According to Mike Brown, Caltech associate professor of planetary astronomy and leader of the research team, "the sun appears so small from that distance that you could completely block it out with the head of a pin." As cold as it is now, the planetoid was usually colder. It approaches the sun this closely only briefly during the 10,500 years it takes to revolve around the sun. At its most distant, it is 84 billion miles from the sun (900 times Earth's distance from the sun) and the temperature plummeted to just 20 degrees above absolute zero.

The discoverers—Brown and his colleagues Chad Trujillo of the Gemini Observatory and David Rabinowitz of Yale University—have proposed that the frigid planetoid be named "Sedna," after the Inuit goddess who created the sea creatures of the Arctic. Sedna is thought to live in an icy cave at the bottom of the ocean—an appropriate spot for the name of the coldest known body in the solar system.

The researchers found the planetoid on the night of November 19, just a few minutes before the sky was obscured by the 48-inch Samuel Oschin Telescope at Caltech's Palomar Observatory east of San Diego. Within days, the new planetoid was being observed on telescopes in Chile, Spain, Arizona and Hawaii; and soon after, NASA's new Spitzer Space Telescope was trained on the distant object.

The Spitzer images indicate that Sedna is more than 1,700 kilometers in diameter, making it smaller than Pluto. But Brown, using a combination of all of the data, estimates that the object is more than 2,000 kilometers in diameter. Between that of Pluto and that of Quaoar, the planetoid discovered by the same team in 2002 that was previously the largest known body beyond Pluto.

The extremely elliptical orbit of Sedna is unlike anything previously seen by astronomers, but it resembles in key ways the orbits of objects in a cloud surrounding the sun predicted 54 years ago by Dutch astronomer Jan Oort to explain the existence of certain comets. This hypothesis--"Oort cloud"—extends a billion kilometers from our nearest star and is the repository of small icy bodies that occasionally get pulled in toward the sun and become the comets we see from Earth.

However, Sedna is much closer than expected for the Oort cloud. The Oort cloud has been predicted to begin at a distance 10 times greater than that of Sedna. Brown believes that this "inner Oort cloud" where Sedna resides was formed by the gravitational pull of a rogue star that came close to the sun early in the history of the solar system. Brown explains that "the star would have been close enough to be brighter than the full moon and it would have been visible in the daytime sky for 20,000 years." Worse, it would have dislodged comets further out in the Oort cloud, leading to an intense comet shower, which would have wiped out any life on Earth that existed at the time.

But the astronomers are not yet worried. They can continue their studies as Sedna gets closer and brighter for the next 72 years. Its next 10,500-year trip out to the far reaches of the solar system and back again. Brown notes, "The last time Sedna was this close to the sun, Earth was just coming out of the last ice age; the next time it comes back, the world might again be a completely different place."
March 30, 2004


Guests: Parag Bhayani, Alex Munoz, Alex Shim

Introduction:
1. Call to Order, 12:05 PM

New/Open Positions:
2. Jenny Fisher will soon post signs for a ARC Representative-at-Large and ARC Secretary outside of SAC 13. If you’re interested, please sign up!

Upcoming Events:
3. Claire Walton reports that the ASCIT formal will be held at the MOCA (I.A.’s Museum of Contemporary Art), with an after-party at an undecided location. The entire museum will be open to the ASCIT formal attendees!! Claire welcomes suggestions for after-party locations via email at exec@donut.caltech.edu.
4. Midnight Donuts will be held on Thursday, April 22, during Prefrosh Weekend. Lots of strawberry donuts.

Other Business:
5. Coffeehouse manager Alex Munoz reports that the CDS (Caltech Dining Service) Coffeehouse employee has been sick for a long period of time, accounting for the Coffeehouse’s recent closures. Alex has asked CDS for a replacement, but does not know what will happen with the Coffeehouse this upcoming term.
6. Jenny announces the first ARC meeting on Thursday, April

1. Jenny reports that an alumni wants to fund an expansion of the leaving awards. Voted 8-0-0 to give Jenny approval to go ahead with this as she sees fit.
2. Kim Popendorp reports that the IHC will present its case (against fresh in Avery) to the Student Housing Committee on March 31. The IHC’s statement is available online at <http://donut.caltech.edu/about/minutes/2004/mar/162004s>.
3. Kim notes that the issue of whether to put prefrosh in Avery this year will be decided by the admissions office by April 9.
4. Kim reports that she serves on an ad-hoc committee called the Swing Option working group, which is trying to make modular housing a viable option for the South House renovations. The committee is touring sample modular units on March 31. Also, an RFP (request for proposal) is out for an architect for the project, and there will soon be interviews for student representatives on the architect selection committee.
5. Kim is also on an ad-hoc committee to fill new positions in Housing. Housing is adding an Assistant Director for Operations and an Assistant Director for O&C, both to be served under Tim Chung, the Director of Housing.
6. Ryan Farmer will meet with publications officers to ensure that every publication adheres to its budget. In the future, the BoD may discuss a resolution to deal with publications that exceed their budgets.
7. Corinna Zygourakis reports that all pages on the donut website pertaining to ASCIT minutes and officers are updated, so check it out now!
8. Corinna also notes that several ASCIT resolutions, including resolutions VII, IX, XI, XIII, XIX, and XLI, were updated to more accurately reflect current procedures. Resolution updates have been posted on the donut website.
9. Corinna reminds everyone that the Alumni Fund is hosting a Sophomore Core Curriculum Completion Celebration (with free food!) on the evening of April 17. For more information, students may contact <eboyse@dar.caltech.edu>.
10. In preparation for a meeting with Vice President for Student Affairs Margo Marsbak and the Division Chairs, the BoD discusses several issues, including student-faculty interactions, complaints about the REGIS online registration system and other scheduling issues, and preliminary honor code survey results.
11. The club meeting (in which clubs request ASCIT funding for the upcoming year) is Friday, April 2, at 7 PM in the Brennen Conference Room of the Center for Student Services. 12. After the club meeting, the BoD will meet on Saturday, April 3 and set its budget for the 2004-2005 year. The budget will then be posted online.

Money Requests:
13. Alex Munoz requests $250 for Coffeehouse party this term. Vote: 6-0-0 (approved). Meeting adjourned 1:00 PM.

Respectfully submitted,
Corinna Zygourakis

The Case Against Fresh in Avery

By BARRETT HEYNEMAN, HESPER REGO, and LIONEL JINGLE

For over a month now, the student-faculty housing committee has become a veritable battleground over the decision to put freshmen in Avery this coming fall. On one side, a sizeable group of Avery residents has submitted their proposal to the committee. Meanwhile, the IHC has recently presented our objections to the idea. With only one undergrad on the seven-member committee (the IHC, as elected representatives of the seven houses, has been crucial in defending the position of the majority of undergraduates.

This idea, if implemented, will be nearly impossible to reverse. Moreover, since this potentially affects all undergrads, they should approve of such a serious issue before any decision is made. However, proponents of the Avery proposal have sidestepped popular opinion and appealed directly to the committee. In addition to lacking public support, the proposal is based on a philosophy and set of ideals that is far more detailed than a simple resolution. Their “shout first” approach without due cause is reckless. Certain details are absolutely necessary to determine if placing fresh in Avery is feasible and would positively impact the community.

In particular, the issue of House dues has not been properly addressed. Currently, Avery receives its entire social budget from Campus Life; this will not be the case if it obtains equal footing with the seven houses. While claiming that dues will not be necessary, the Avery Conference would fund social events. Nothing in the current proposal resolves this discrepancy.

Furthermore, having freshmen in Avery would be a detriment to Avery’s current balance of openness and community. The Council’s ideal of forging exclusive membership allows any student to live in the house. If this continues, freshmen would introduce a singular culture, which would alienate those outside the community, resulting in de facto exclusivity. Displaced members of other houses and those who reject the house system altogether will likely be disruptive to the continuation of an Avery culture.

The establishment of such a culture has been the Council’s key argument for receiving freshmen. At the last faculty meeting, a resident of Avery confirmed that without freshmen next year active members of the community will leave, and Avery’s culture will likely dissolve. This statement betrays the instability of Avery’s community. It would be a mistake to introduce freshmen into such an environment.

In the end, more would be lost than gained. Those who seek an on-campus alternative to house culture would lose a refuge. The freshmen placed in Avery’s idealistic yet unstable community would risk isolation there and from the undergraduate house culture at Caltech. Advocates of the proposal are only concerned with the continuation of Avery’s current culture, while the freshmen’s well-being and, to a lesser extent, the need for a house-alternative, should be the most important concerns.

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Cooperation Crucial on Avery Issue

By NEIL TIWARI

The IHC is an important gov­erning body, composed of the Seven House presidents and an elected chairperson, which wields much power over student life. The IHC has always presented itself as an entity to which anyone can go to its meetings and have his or her concerns addressed, as an entity that represents the majority and fights for its views, and as an entity that forms its views on student opinions. However, the question is not of whether one can go to the IHC, but where things go from there.

This is about Avery, about its Council, and how it has tried very hard to work with the IHC. Avery no longer wants second-class treatment from the other Houses. It wants to build a community and it wants to extend its hand to incoming freshmen. The hope is that some of them might find Avery as a place that better suits them and will stay there through­out their years at Caltech, keeping the Avery community alive and growing.

The Council tried in the past with the previous IHC, and per­haps the comments contained in their timeshowedhow dif­ficult it was. The vulgar words and insults in their official min­utes and the e-mails containing the flat-out rejection of Avery by the IHC are a permanent record of how the IHC was not such an open-minded and supportive body. The past has created a rift between the IHC and Avery, giving rise to many misunderstandings.

A new IHC has risen, and while they are indeed more open and considerate, I worry that the specter of past difficulties have come back to haunt us. Just as in the past, Avery and the IHC are not working together, but against each other. Each side has a differ­ent view, and neither has worked with the other to achieve some­thing together. Both sides are not sitting down together to submit a joint proposal to the Faculty Stu­dent Housing Committee, but are each submitting proposals and counter-proposals.

Do the IHC and Avery disagree about the idea of freshmen in Av­ery on a philosophical level because it is inherently a bad idea or because it is inherently a good idea, but either way, what matters is that the IHC or the Council has a proposal that risks the big ex­perience of the future freshmen? If the former question is an is­sue, then perhaps one can under­stand why the Student Faculty Housing Committee found it necessary to make a decision to prevent the constant quarreling on both sides. Once a binding decision is made, both sides no longer fight over philosophy and are forced to work together to implement the details of what the Faculty decide is the future direction.

If the latter question is an is­sue, then over the past months we have wasted time submitting proposals and counter-proposals when instead we all could have been working in a joint proposal, one in which both sides feel comfort­able with the details and work together to make it happen.

I implore both Avery and the IHC to give working with each other a joint proposal a chance. I hope the IHC will be sensi­tive to the concerns of the Avery residents, respect the author­ity of the Avery Council, and under­stand the desire for Avery see the changes it desires implemented as quickly and as efficiently as possible. I hope Avery will reach out to the other Houses, obtain a list of concerns from the IHC and work with them in address­ing them one-by-one, and work to gain the acceptance of the under­graduate community at large.

Through working together, neither side will see an absolute victory in the sense that both sides will not end up doing what each believes is the absolute best solution, but at least at the end of the day both can leave the issue not feeling in defeat. Avery has gone to the IHC, but from there things have gone nowhere. Per­haps, with another try and a bet­ter understanding for each other, we can go quite far in achieving a positive outcome.
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Over 50% of UGs Fill Out
Health Survey
Blacker Wins Prize for Turnout

By JANE CURTIS
Health Educator

I remember when I first be­
gan talking with students and colleagues about the health survey, someone said, “I’ll be surprised if you get more than 300 students to respond.” Well, they were wrong and I’m very pleased. The response was ter­
rific - 1,018 students which is a 50.35% response rate. I’m sure the personal and undergraduate house incentives contributed to a high response rate, but I also be­lieve Caltech students like sur­veys and appreciate having their opinions heard.

Forty-one percent of the grad­uate students took the survey compared to 58.8% of the un­dergraduates. The female par­
ticipation rate was 37.3%; male participation rate was 62.7%. Congratulations to Blacker for winning the $300.00 cash prize - 90.35% of the house members took the survey (and I know they need the money). I am waiting for a few more prizes to arrive, but anticipate handing them out beginning April 12th. Winners - please keep an eye out for an email from me, and the names will be posted on the bulletin board outside the Coffeehouse next week.

In the coming months, I will be perusing the data and hold­
ing student focus groups. The overall goal is to share key sur­vey findings and to learn from students what they think the best program format should be, given the distinct nature of Caltech.

Thank you again for taking the time to take the survey. I appreciate all of the feedback, including its limitations. This is a very good start to understand­
ing the health of Techers. As I have mentioned to some people, the next I administer this survey, I’ll be able to create 6-8 “Caltech specific questions”, which will allow me to address some of the unique concerns faced by the graduate and undergraduate stu­dents.

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Caltech Health
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Slated for April
Variety of Activi­ties Planned

We hope you can join us for the Caltech Health & Worklife Fair on Friday, April 16th from 1-2:00p.m. Our theme is Get Balance! -- making the of­ten-overlooked need to balance our lives between work, family, research/study and other com­
mittments. The Fair is designed to promote well-being by providing information and resources on a variety of health-related topics. It has been expanded this year to in­clude more health screenings and summer camp sign-ups. Health Net (our new health care pro­vider) will be on hand to provide free health-screening, first aid Winnett Clubroom. In early April, stop by the Caltech Bookstore window display to learn important infor­mation about the various health screenings. The American Can­cer Society will also be holding a blood drive in Winnett Lounge.

The band, Upstream, will return with the great sound of reggae; we will offer more chair mas­sages and shorter lines for the climbing wall. The participating vendors will advertise their prod­ucts and have give-aways. Take a break, come outside and enjoy the festivities.

Sponsored by Human Resource­s, Staff and Faculty Consulta­tion Center, Caltech’s Rideshare Program and the Caltech Y. The success of this event would not have been possible without the generous support of the staff and students on the Planning Com­mittee. A special thanks to the following departments: Athletics, Caltech Y, Campus Life, Environ­mental Health & Safety, Facilities Management, Health Education, Human Resources, Safety Office, Security & Parking Services, Staff and Faculty Consultation Center and the Student Health Center.

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2005 date for the introduction of freshmen into Avery. The idea is winning over moderate factions of Avery’s Council as well as the guarded consideration of elements within the IHC.

“I’m willing to wait a year and let Avery develop as a house rather than deal with the huge backlash,” said keyponent Ryan Witt ’05, widely seen as a candidate for Avery’s next chancellor. “I think there have been some positive changes and I’d like to see those positive changes continue.”

A 2005 date would give Avery a full year to work out the IHC’s requested specifics. With the council’s just-launched campaign to fight Avery’s case to the people, Avery may have even time to win over skeptical undergraduates, the solid majority of whom presently side with the IHC.

Still, it’s a majority of supporters who share Witt’s position. Avery’s resident associates said they’re “pro-2004,” while many in Avery’s core group worry that momentum would drift over the course of a lost year.

Jason Yo­

But one issue Avery couldn’t lend

to freshmen without changing its this end, the IHC’s presentation Avery rights advocate Neil Tiwari on Monday. Introducing a non-binding arbi­

“Many of the concerns they’ve raised we think we have a reasonable meaning of addressing,” said Avery Chancellor Orion Christof­

council staged an internal meet- date before proceeding with such an off-campus dormitory. Stressed that Avery is seeking approval for

The larger relationship between

Still, advocates maintain that Avery can build such a community with, as Avery’s resident associate Geoffrey Hom, “it may have begun to taint how people think about it.”

Indeed, the IHC’s reasons for concern are many. In its Wednesday talk, the committee called on Avery to lay down specifics to a housing lottery system, a plan for Rotton room picks, a house dues framework and an additional RA

to freshmen without changing its status as an off-campus dormitory. An Avery with freshmen, said the committee, would lose its identity as a haven for those dissatisfied with the house system.

“There are two possible out­

But one issue Avery couldn’t set aside so easily was the IHC’s call for an undergraduate man­

“Orion

2005. Nor is the IRC ready to hop

At Avery’s case to the people, Avery’s chief proponent called

continued.”

Myers, said keyproponent and

Still, proponents called the IHC’s demand for immediate de­

Nor is the IRC ready to hop

After this year, said keyproponent and

needed to

L. Tom/The California Tech

Garcia ’05

council staged an internal meet­

Asimow.

and the IHC listen

IHC also pressed the ques­

Saying that students would have to describe my sympathies this that some among Avery’s core

The larger relationship between

populace of those upset with per­

IHC’s help. They can’t just say that we’ll convince all the un­

Lionel Jingles, center, clarifies a

At this point during the presentation last Wednesday before the

Avery Monday. Introducing a non-binding arbi­

Molly Jones.

But one issue Avery couldn’t set aside so easily was the IHC’s call for an undergraduate man­

“Many of the concerns they’ve raised we think we have a reasonable meaning of addressing,” said Avery Chancellor Orion Christof­

Garcia ’05

council staged an internal meet- date before proceeding with such image was a

L. Tom/The California Tech

IHC members and Avery advocates look on as Ricketts President Lionel Jingles, center, clarifies a point during the presentation last Wednesday before the Student Housing Committee.

L. Tom/The California Tech

Students Cathy Jurca said after Wednesday’s meeting that although “each side argues its case articulately and with enthu­

The larger relationship between

Still, a minority of support­

In Avery’s core group worry that momentum would drift over the course of a lost year.

Jason Yo­

But one issue Avery couldn’t lend

a negative vote for freshmen year after year.

Nor is the IRC ready to hop

Still, the IRC is ready to hop on the bandwagon. Neither Rick­

council’s just-launched campaign to

Still, the IRC is ready to hop on the bandwagon. Neither Rick­

In Avery’s core group worry that momentum would drift over the course of a lost year.

Jason Yo­
Bob shows off some of its hardware, including eight computers, two power supplies, a generator, and an air conditioner, along with the equipment needed to run its sensors.

Team Caltech Reached For Second Grand Challenge, Two Years Away

Continued From Page 1, Column 5

Being a cross-country race, the track covers a wide variety of different terrains. These included clear roads, side roads, dirt trails, rocky terrain, an open field, rain, lake beds and highway underpasses. Since a vehicle needs to travel approximately 25 mph on average to meet the time requirements of the contest, the challenge is by no means trivial. Dr. Murray showed some videos of human drivers driving in cross-country conditions similar to the contest and it was evident that any successful design would have to take into account the huge amounts of vibration, dust and sliding that cross-country driving requires.

Since there was only a year from the announcement of the contest in early 2003 to the actual contest on March 13th, Dr. Murray said that he did believe that there was enough time for an experienced team to win the contest in the first year. Thus his goal in entering the contest was to compete and get as far as possible. From this experience, the team would have a solid foundation to compete in and win future runnings of the race.

A goal of Dr. Murray’s was that “Team Caltech” be primarily composed of experienced undergraduate students. During the spring of 2003, an undergraduate course was offered in which 53 students did an initial project analysis and design. Continuing into the summer, 23 undergrads did some in depth design work. During the fall, 25 people built the actual vehicle and during the winter, 20 students plus 10 additional helpers from Caltech and JPL finished up everything in preparation for the contest. To coordinate the project, everyone was assigned to one of three teams: Vehicle (which took care of the mechanical hardware), Embedded Systems (which handled the computational and control algorithms and vehicle management) and Planning (which wrote the software for navigation, route planning and terrain sensing).

The letter of the year of the work is “Bob”, a heavily modified 1996 Chevy Tahoe 4x4. At a cost of $500,000 and more than 20,000 person-hours, Bob has been retrofitted with electrically controlled steering, throttle, brakes, transmission and ignition. There are 8 computers, 2 uninterrupted power supplies, a generator capable of putting out 6 kW of power and an AC to cool everything. For navigation, the sensors used were 2 LADARs (Laser Detection and Ranging - a sort of radar but using lasers instead of microwave), 2 sets of stereo cameras (one for short range and one for long range), a GPS unit capable of 30 cm accuracy and an IMU (inertial measurement unit) built by Northrop-Grumman that could measure acceleration and velocity.

Since the vehicle had to be completely autonomous, a great deal of work went into writing the navigation software. Using a two-stage approach developed by the Mars rovers (which are also largely autonomous), the core of the navigation system is an “arbiter” program that integrates sensor data and makes high level decisions. Each sensor (the LADARs, cameras, GPS, etc.) sends to the arbiter a so-called “goodness map” that indicates the preferences for each direction (or arc) of movement as determined by that sensor. For instance, if the short range camera detects an object ahead, then the goodness map for the short range camera would indicate a strong aversion to traveling straight ahead. The arbiter receives such information from each sensor at a rate of 2-10 measurements per second and integrates this using a weighted average into the final decision to go a certain direction at a certain rate.

According to Dr. Murray, there took more time to incorporate all of the original design specifications. Some parts, including a key piece of hardware showing progress could not be completed in time. Nevertheless, on March 9th, the team headed out to Fontana Speedway for the qualification round. In round 1, the team had averaged 1.25 mile speed classified as a series of GPS waypoints that included barriers, obstacles, ditches and an underpass. To qualify, the vehicle had to make it through the course without hitting any obstacles. Teams were allowed two runs and the performance plus time was used to determine the pole position in the actual contest. Of the 25 teams that entered the qualification round, only 7 actually finished the course and among these was Team Caltech. In fact, Caltech was the first team to make it all the way through the course. This event not only allowed Team Caltech to see how “Bob” performed on an actual course, but it also gave them an opportunity to see the competition.

The greatest competition came from the “Red Team”. Led by Dr. Whittaker of Carnegie Mellon University, an institution with one of the best robotics programs in the world, the “Red Team” was by far the most well-funded and experienced team. Their vehicle, a converted military Humvee, took $3 million to build and contained the latest sensors and best software.

Of the other teams, there was SciAutoonics, Golem and TerMax. SciAutoonics was a $1 million converted dune buggy built by employees of Rockwell Scientific Company and Elbit, an Israeli defense firm that has extensive experience with UAV’s (unmanned aerial vehicles). Golem was a modified Ford F-150 pickup truck built by a team led by Caltech Phd graduate Richard Mason and funded by $35,000 of the Student Investment Fund which was organized at Caltech which was founded in the 1970s from an endowment of $10,000 along with the birth of its sister club in Scripps College from the same benefactor. The two organizations keep close contact and have semiannual banquets that they take turns hosting. The organization was created to allow those in the Caltech community to learn and practice making investments. All members of the community are welcome, regardless of their knowledge or experience. Currently, over half of its members are inexperienced and are mostly undergraduates.

Through all the unpredictable trial of the stock market, the club has successfully managed its investment so that its portfolio increased over $2,000. Over 80% of the portfolio is invested in stocks, which is an unusually high proportion compared to most personal portfolios, showing the club’s current aggressive and optimistic view on the market.

The Grand Challenge, Two Years Away

By DIANA LIN

The Student Investment Fund is an organization at Caltech which was founded in the 1970s from an endowment of $10,000 along with the birth of its sister club in Scripps College from the same benefactor. The two organizations keep close contact and have semiannual banquets that they take turns hosting. The organization was created to allow those in the Caltech community to learn and practice making investments. All members of the community are welcome, regardless of their knowledge or experience. Currently, over half of its members are inexperienced and are mostly undergraduates.

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The judges shut down “Bob”. SciAutoonics II managed to travel 2.5 miles while “Red Team” managed 3.5 miles but backed up a few times and got stuck. Officially, it traveled only 1.2 miles. According to Dr. Murray, future events include improving perception, decision making, and planning by getting more system engineers and improving the teamwork.

The DARPA has already announced the Grand Challenge 2 for the fall of 2005 with an increase in the prize money to $2 million. In response to this predictable development, Dr. Murray and Team Caltech will implement an aggressive strategy to get Bob in shape for the next contest and are looking for interested undergrads to help out.