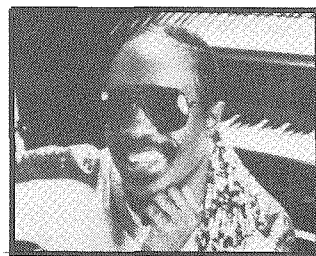


ANY TIME
YOU'RE
OUT FROM
UNDER

The California Tech



Volume XCIV, Number 26 Pasadena, California Friday, May 7, 1993



A mysterious observer watches over last Saturday's Medieval Renaissance Society Festival on the Beckman Institute Lawn.

Caltech Receives "J-machine"

Caltech Public Relations

Caltech computer scientists took delivery last month of a "J-machine," an innovative "fine-grain" multicomputer (parallel computer) that contains 512 computers, or nodes.

Designed and built by MIT's Concurrent VLSI Architecture Group under the direction of Bill Dally, the J-machine will reside at Caltech, where the Scalable Concurrent Programming Group, headed by Stephen Taylor, is developing programming tools for this class of machine and conducting a wide variety of experiments in large-scale applications. The collaboration between MIT and Caltech is sponsored by ARPA, the federal government's Advanced Research Project Agency.

"The J-machine represents a radically new way to organize the operation of a computer," said Taylor, assistant professor of computer science at Caltech. "This is an experiment in computer architecture that pushes the envelope of scalability and granularity in multicomputer programming."

In ordinary multicomputers, communication is slow because messages must pass through many layers of software. To minimize the time lost during communication, large bundles of information are lumped together and transmitted all at once between nodes. But this large "grain size" doesn't take full advantage of the capabilities of

multicomputers: it doesn't allow the full level of parallel activity to be used productively in a problem.

The J-machine improves on ordinary multicomputers, making communication cheaper in terms of time by tightly coupling the communication hardware to the processing hardware. Programmers can take advantage of this tight coupling to remove the layers of software that messages have to pass through, which improves the performance of the application.

The easier, faster communication also makes possible a finer granularity—it reduces the ratio between the amount of time the computer spends on useful computing work, and the time it's forced to spend on communication between nodes. The fine granularity enables the computer to efficiently execute many small pieces of work concurrently.

The J-machine also uses "scalable" computer programs that are able to run on machines of widely different sizes. For example, using an earlier J-machine that has only 32 nodes, Taylor's group has already developed software tools and applications that also run on the 512-node model. "We'll use this new J-machine to develop software tools for a new generation of multicomputers," Taylor said. Future multicomputers will contain thousands or possibly even millions of nodes, and Taylor's group is fashioning the software that will coordinate their activity.

The Caltech group is also stretching the limits of concurrent programming by developing a variety of "irregular" applications—programs in which the structure of the computation changes as the program is running. The group, in cooperation with a variety of industrial and academic partners, is developing applications that simulate supersonic fluid flows, electrical circuits, and molecular interactions.

Anshelevich Wins Zeigler

by Suzette Cummings

Michael Anshelevich has been chosen this year's winner of the Fredrick J. Zeigler Memorial Award. Michael is a junior majoring in mathematics.

This award was established in 1989 to honor Fredrick J. Zeigler, a member of the class of 1976 and an applied mathematics major. The award is given to a pure or applied mathematics student in the sophomore or junior year who has shown excellence in scholarship as demonstrated in class activities or in preparation of an original paper or essay in any subject area.

Conservation at Caltech

by Sakae Suzuki

It is May, the school year is almost over, and rumors of Ditch Day are beginning to surface. Here's a review of the changes in environmental programs at Caltech over this past year, and the plans for the year to come.

Recycling

The Caltech Y continues to coordinate the recycling program, which is staffed by student volunteers and work-study students. A handful of students make the rounds, usually once a week, to empty the yellow bins located throughout the campus. If a yellow bin nearby gets really full, you can help us in two ways. First, you could give your arms a little exercise and dump the white paper in the yellow bin into a nearby green dumpster-sized container labeled "White Paper." They are at six locations on campus: west of the Beckman Behavioral Biology building, north of Crellin, on the Arms loading dock, between Fleming and Firestone, behind Industrial Relations, and at the recycling center north of Beckman Auditorium. If you choose to dump your papers at the recycling center, please do not just dump the bin into the dumpster, but rather empty the bin by taking out a handful of paper at a time. This takes 5 minutes at most, and it is important to remove any contaminants. Your other option is to call

Chris Sundberg at the Caltech Y (x6163) and let him know the location of the full bin. He will then try to contact the student in charge of the bin, but this may take a few days, so please be patient.

There is a change in the recycling program on the way. The Committee on Institute Environment, appointed a year ago, has been working to slowly transfer the student run recycling program to an Institute managed program. The current plan is for the custodial staff of Physical Plant to take over the recycling operation. Delmy Emerson, supervisor of the custodial staff, has been working on a pilot program for the custodial staff to empty the yellow bins as well as a way to collect white paper from individual offices. Several alternative methods for collection are being considered. We thank you in advance for cooperation with the trial program.

Here are some things you can do to help conserve and recycle. Use double side printing, and encourage professors and T.A.'s to do the same. Use recycled paper—the quality has increased dramatically in the recent years. Reduce your use of colored paper—colored paper is lower grade, and thus, it is difficult to recycle in today's market. Avoid contaminating the recycling bins with Post-it's, Scotch tape, staples, glue, and envelopes. Request recycled paper when

CONSERVATION, page 7

Glee Club Spring Concert

by Heidi Sutton

The Caltech Men's and Women's Glee Clubs and director Don Caldwell will be presenting their annual Spring Concert on May 18 and 20. Joining them for the performance will be the Occidental College Choir and Glee Clubs, their director Tom Sumerville, and the Caltech-Occidental Symphony Orchestra, conducted by Allan Gross.

Featured on the Program will be Mozart's Grand Mass in C Minor, and Liszt's "Les Préludes", which will be performed by the orchestra only. There will be four professional soloists singing with the choir for the Mass: sopranos Holly Ristuccia and Gloria Prosper, tenor Benjamin Reckdahl, and bass Dean Elzinga (Caltech '87).

The first of the two concerts will be on Tuesday, May 18, in the St. Phillip the Apostle Church at 151 S. Hill, between Green and Colorado. The second concert will be in Occidental's Thorne Hall on Thursday, May 20. Both concerts will begin at 8:00 P.M., and admission is free on both nights.

The Grand Mass in C Minor is one of two great works by Mozart which were never finished before he died, the other being his Requiem. The Concert will include mainly those parts of the Mass which were originally written by Mozart himself.

Ditch Day Media Relations

Yes, Ditch Day is tomorrow, and, as usual, the media will be present to witness the wonder of Techers in the wild. However, through the work of the Caltech Media Relations Office, there will be an opportunity for participants in the Ditch Day festivities to communicate with the press. The Caltech Y will serve as "Media Headquarters" for Ditch Day, and you are all invited to drop by, get some food, and talk to reporters about life at Tech, Ditch Day events, and the musical genius of Abba.

The annual Career Development Center student surveys have been sent out to all graduating students. If you received one, please return it to the C.D.C., room 08 Parsons-Gates by May 21. If you are graduating and did not receive one, please pick one up at the Career Development Center.

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letters to the editor

Don't Smash the Games, Eh?

This letter is not directed toward the roughly 95% of the Caltech Community who treat the S.A.C. game room with respect. It's directed toward the other 5%.

You, the same ones who are constantly complaining about not getting better games in the game room are the very reason that things aren't better.

This campus doesn't have the number of students to support a room full of all the newest, hottest games. In the best case, we could support a couple of new games and the rest good games.

When you beat on the games you do three things:

1. You make me spend a lot more on repair costs.

2. You eliminate any revenue that a machine could earn while it's out of order (not to mention the people who lose interest in the game during its out of order period).

3. You make the trade-in value of the game less than it should be.

All these three added together give us a lot less to put toward the next games we get. I'd love to put in all great games, but I'm not going to take a loss to do so. This game room doesn't earn as much as you all may think. That's why it's important we all take care of it so that it can at least be as nice as possible.

I've resisted the temptation to list all acts of vandalism we've had because this newspaper has a limited number of pages. But I will say that recently, over half the repair time and repair costs has gone toward fixing problems from vandalism.

Next time you get killed by the alien you're fighting a little sooner than you deserve, think about the effect you're having on the whole Caltech Community before you bend the joystick into an L or kick the coin door into a new concave shape.

Doug MacKenzie,
Owner and Operator
Class of 1982

Please send letters to the editor to *The California Tech*, Caltech 40-58, Pasadena, CA 91125, or by e-mail to editors@tech.caltech.edu.

The Tech reserves the right to edit all letters for brevity or otherwise, and to refuse to print any letter for any reason. Although we strongly discourage anonymous letters, we will withhold the author's name upon request.

Earnest Defended

I am greatly disturbed by the ignorance and lack of tact apparent in last week's review of TACIT's production of *The Importance of Being Earnest*. Chris Echols and Dennis Chang's treatment is an unfair and inaccurate representation of the performance. I am writing in hopes that any who were dissuaded from attending the show last weekend may be convinced to go and watch it this Saturday or Sunday before it closes.

I have been an active participant in the theatrical productions here at Caltech for about two years. I played the lead role in TACIT's fall production and had a major singing role in this year's musical, so know what I am talking about when I discuss acting, singing, or the mechanics of a TACIT performance. I hope that my corrections and criticisms are seen as coming from a knowledgeable, competent source.

In their review of *Earnest*, Echols and Chang complain that "emphasis on 'turn of the century London' detracted from the play." They justify this opinion by saying that "The earmark of a great play is its universality, its ability to deal with fundamental aspects of human existence." I agree with the latter classification wholeheartedly. However, a strong grounding in a certain place and time does not diminish a performance's universality. Indeed, a foreign flavor in accents, costuming, and scenery can highlight a play's portrayal of a common humanity; the trivial differences emphasize the basic congruity. Furthermore, a playwright chooses a setting to illustrate his desired theme. In many shows the setting is a vital part of the characters' personalities or predicaments. For example, in *A Man for All Seasons* (TACIT's first production this school year) Robert Bolt uses the context of the Anglican Reformation to portray the conflicts between conscience, duty, and love. The historical setting provides the author with a foundation on which to build his portrayal of the human condition. An "emphasis on 'turn of the century' London," therefore, should not be seen as undesirable.

An additional problem with Echols and Chang's review is their

belief that "Several characters were added to the script..." They state that "the additional scenes were integrated into the play quite well. However their purpose is unclear... the original script would have been entirely adequate." Echols and Chang are obviously unaware of Oscar Wilde's original manuscript: a four act show of which TACIT is performing a slightly trimmed version with the middle two acts fused. The initial producer of *Earnest* cut parts from the original script because he believed the show to be too long (it runs more than three hours). For a time only this abridged version was known in English, but the original play survived in Germany and was later translated back from German to retrieve the form that Wilde had originally intended. TACIT has not made superfluous additions to *Earnest* as Echols and Chang suggest; it is performing the original show.

An addition that TACIT has made is that of period music. Echols and Chang do not understand its presence, saying that "[The songs] turned out to be nothing more than something to fill the time... the singing dulled the fast-paced humor..." This is untrue. Songs have been placed at each of the shows' procedural transitions in order to make them less abrupt. For example, a solo has been set at the break where the original two middle acts of the four act show have been fused. Other songs are placed such that the transitions outdoors to the garden scene and back are more smooth, shifting the audience's attention from characters who are "unaware" of them to singers who do perceive, and can therefore interact with, the audience. This allows the singers to instruct the audience of the change in locale in a less obtrusive manner than would be the case if a member of the technical crew were to announce the change right on the heels of an act's closing line. The songs do not "dull the fast-paced humor" as Echols and Chang suggest, because they are placed only at natural breaks in the action.

Echols and Chang are further unimpressed by the quality of the outdoor soloists. They complain of one singer being unable "to hear the piano in Dabney Hall..." he faltered frequently in search of the accompaniment." They do not, however, mention the fact that this



Clarence
the Hun

Clarence Clarifies

Hi! My name's Clarence, and I'll be filling in for Ator O'Malley this week. Enough of this chit-chat... let's read some letters!

Dear Ator:

Despite what is implied in Father Wilson's letter to the editor last week, atheism does not cause selfish...

Aargh! Randroid heathen!

... Reason is not a panacea. But it is a common ground, upon which human beings of fundamentally differing views can coexist without butchering one another out of brotherly love. And selfishness...

Avast! [hack, slash]

... Saying that it "harbors an extraordinary number of apologists of selfishness" implies that he sees lack of faith in God and self...

Taste the raw steel of my blade, O Mangyn of Chaos!!!
That's better.

Dear Ator:

Seeing as how my question has nothing to do with national service or selfishness, I'm not sure if you'll print it, but here goes. What is the origin of the word "ice"?

—Brad in Biology

Dear Brad:

When ancient Phoenician explorers landed in what is today the Northwest Territories, they encountered a strange, cold substance that the native Inuit people called "Iqaluaq." They brought the new word back to the Mediterranean region, where it was eventually Latinized into "Icus." The word "ice" became part of English when the French-speaking Norman invaders conquered England in the 9th century.

—Clarence

soloist was unlucky enough to begin his song right before a barrage of air traffic. Under those conditions, it would have been difficult to keep from faltering even if the piano had been moved outside for the second act (which it can't be for fear of destroying the tenuous tuning). To keep this kind of problem from occurring again, TACIT is now moving the piano closer the doorway, and has been doing so since the second showing.

A second complaint of the reviewers was the fact that an additional outdoor soloist seemed to have "little projection, possibly because of the open-air setting." There is no "possibly" about it. Some rooms are acoustically "dead" due to the muffling of carpeting or drapes; others are acoustically "live", having many flat, reflecting surfaces that bounce the sound out to the audience and cause the entire room to resonate, thus amplifying the sound. In the outdoors, however, there is no way to trap the sound. No matter how much volume an outdoor singer produces, it will sound much quieter

continued next page

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Volume XCIV ♦ Number 26
May 7, 1993

EDITORS

Michael "Wet Head" Benedetti
Chris "Moose Rider" DuPuis
Michael "Gas Face" Radford

CRIME BEAT EDITOR
Gypsy Achong

EVENTS & NOTICES EDITOR
Jeff Denniston

WORLD NEWS EDITOR
Momo Jeng

PHOTOGRAPHER
Anoop Sinha

WRITERS
Jeff Goldsmith
Erin Egan O'Brian
Heidi Sutton
Sakae Suzuki

BUSINESS MANAGER
Chris "Bronzed Dachshund" Echols

CIRCULATION MANAGER
Ken Walsh

The California Tech
Caltech 40-58 SAC
1201 East California Boulevard
Pasadena, California 91125
(818) 356-6154

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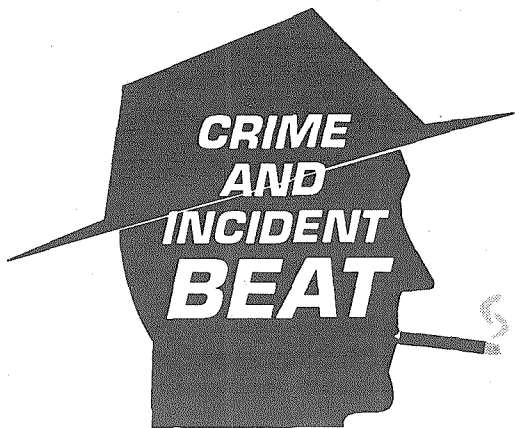
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Zhang Yimov's

The Story of Qiu Ju

Daily 5:30, 8:00, 10:15 p.m.
Sat-Sun Bargain Matinee 1:00 p.m.
Sat-Sun Regular Matinee 3:00 p.m.



by Gypsy Achong

Crime tip: Lock your bike to something. Otherwise someone can just carry it away and worry about breaking the lock when they get home.

4/20-21 2:00 P.M.-12:00 A.M. A label maker that was stored in a cabinet in the store room of Winnett Center was missing. The loss was not reported in the hope of its return, but this did not occur. The room and cabinet are usually unlocked. \$150

4/28 2:00-3:00 A.M. A noise woke an occupant of a house on S. Hill. She turned on a light and the sound stopped so she went back to sleep. In the morning, she discovered the lower louvers of a window, which had been closed the night before, were open, and a soapdish that had been on the windowsill was in the sink. There were no signs that someone had entered the house.

4/30 9:00 A.M.-7:48 P.M. Someone entered a car parked in the Tournament Park parking lot, south of the tennis courts. An envelope containing an INS travelers permit and sixty-five dollars was removed. There was no evidence of forced entry. Pasadena Police were called to the scene. \$65

4/30-5/1 9:00 P.M.-3:30 A.M. A student parked a bike in a bike rack located in the Catalina Housing complex. The bike was locked but not to anything. Both the bike and the lock were stolen. \$490

4/30 5:00-10:00 P.M. A bike and some clothes were stolen from a house on S. Catlina. The bike was leaning on a tree in the backyard, and the clothes were on a clothesline. The door to a small storage shed which is never usually open, was also open. \$140

4/31 This entry is bogus. Please be advised. A graduate student reported loud screams near his lab to security. Several hours later, security arrived on the scene. A partially dissected human body was found, which security reported to the Pasadena Morgue. Only after much paperwork was the body examined. Close kin members and neighbors have been informed of the death. No motive has yet been found.

5/2 1:00-2:00 A.M. A fire extinguisher was removed from the kitchen of a house at S. Hill during a party. A search of the house and grounds was made but the extinguisher could not be found. The pin that allows the extinguisher to discharge was found but there were no signs of such a discharge on the premises. \$35

Total this week: \$880

continued from previous page

than it would indoors. This soloist put out as much sound as is to be expected, and it was quite sufficient to make out both the lyrics and the tune. Indeed, this soloist's volume created a good balance with the quiet accompaniment drifting out through Dabney's large glass doors.

I have one final criticism of Chris Echols and Dennis Chang's review. It was tactless. When they disapproved of something, they did not consider the feelings of those they were berating when they expressed their dissatisfaction. Instead of saying that so-and-so's voice cracked, or so-and-so's singing was even worse, it would have been much less brutal and no less accurate a statement of opinion to have said that some of the singing was unpolished. TACIT's performers, including myself, are not professional actors whose job it is to take

the slashing emotional blows of professional critics. We are amateurs, sacrificing a large chunk of our time (setting aside our studies, jobs, and families) to do something that we enjoy while providing the Caltech community with inexpensive entertainment. I can understand a reviewer wanting to fairly represent his opinion of a performance, but it can be done with far more care than was shown in last week's review.

To avoid misconceptions and tactlessness in future reviews, I would suggest that reviewers be willing to go backstage and talk with the show's actors and crew. This would both correct misperceptions and allow the performers to be seen as people with feelings. Sharing knowledge of our struggles and successes might temper any hurtful comments that would otherwise arise.

Gary T. Olsen

Andorra

This week, French President François Mitterand signed the Andorran constitution. Andorra's status as a co-principality ended, and it is now officially a state.

France

Former Prime Minister Pierre Bérégovoy committed suicide. He was apparently upset about allegations that he had improperly taken an interest-free loan from a businessman friend.

France got permission from the EC to set up harsh temporary quotas on banana imports. The French quotas will last until July, when new EC quotas on bananas will take effect.

Germany

Markus Wolf went on trial. He was the head of the East German intelligence agency, and is being tried for treason, bribery and espionage. He defended himself by pointing out that he is being tried for acts which were legal and patriotic under the East German government at the time, and that his counterpart, Klaus Kinkel, former head of West German federal intelligence, is now foreign minister of united Germany. The German equivalent of the Supreme Court has not yet ruled on whether such trials are constitutional.

Monica Seles was stabbed at a tennis game by a spectator who wanted Steffi Graf to get the No.1 ranking in women's tennis.

Israel

Prime Minister Rabin and Foreign Minister Peres argued over how to solve the Palestinian problem. Peres argued for rapid peace talks and indicated willingness to accept Palestinian statehood, while Rabin opposed any quick solution.

The Supreme Court began deciding whether it was acceptable for Israeli security to use "moderate physical pressure" when interrogating Palestinians. Civil rights groups have criticized such practices as torture, while the Israeli government has defended these interrogation techniques as necessary to stop the Palestinian terrorism.

Italy

Following the Italian referendum, in which voters clearly called for drastic change, Prime Minister Amato resigned. Carlo Azeglio Ciampi became Prime Minister Thursday, forming Italy's 52nd postwar government, and bypassing several traditional party procedures for forming coalition government. That afternoon, the Italian Parliament failed to lift all parliamentary immunity on former Prime Minister Bettino Craxi, who is charged of having Mafia contacts, sparking public outrage. Four of his ministers resigned later that day.

Russia

Communists marching in a banned May Day demonstration fought with Moscow riot police. About 70 protesters were hospitalized, while another 70 were injured.

Yeltsin offered to send troops to help NATO or U.S. forces in ex-Yugoslavia.

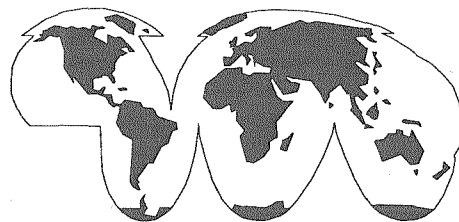
Serbia

Following the threat of U.S. air strikes, Bosnian Serb leader Radovan Karadzic signed an international peace plan. The plan is supposed to stop Serbia from "ethnic cleansing" and taking over Serb-held land in Bosnia-Herzegovina and Croatia. Bosnian Serbs began new artillery bombardment on the Muslim town of Zepa, making many question the level of Serbian commitment to the treaty. The Bosnian Serb Parliament did not approve of the agreement, but said that the matter would be decided in a referendum of Bosnian Serbs, scheduled for May 15th and 16th. The action angered the Serbian President Slobodan Milosevic as well as the Western and Bosnian leaders

Somalia

U.S. troops gave control to the U.N.

World News



by Momo Jeng

peacekeeping forces on schedule. The U.N. forces are largely from Pakistan and the U.S.

South Africa

Gaye Derby-Lewis was charged in the murder of ANC negotiator Chris Hani. She is accused of arranging a hit list of several people, including Hani.

Sri Lanka

President Ranasinghe Premadasa was assassinated in a May Day parade by a suicide bomber. 14 others were killed. Prime Minister Dingiri Wijetunge became acting president and imposed a curfew. Tamil rebels are suspected.

United States

Clinton's new health care plan may include a malpractice plan under which doctors would be exempt from malpractice suits. Instead, such suits would be made against the hospital, insurer or health care plan involved. Ideally, the plan would eliminate high-priced malpractice insurance, encourage hospitals and insurers to monitor doctors and reduce the number of attorneys involved in malpractice cases. The American Medical Association opposes the plan, because it does not limit damages, and may encourage people to undertake malpractice suits.

Clinton's task force on health care ruled out a value-added tax as a way to fund health care reform, and considered a new payroll deduction.

Clinton's proposed line-item veto for cutting pork from budgets was approved 258-157 in the House and sent to the Senate.

Clinton's Labor Secretary Robert Reich backed the North American Free Trade Agreement.

Clinton is expected to announce his national service plan, under which 150,000 would get socially useful jobs from the government to pay for col-

lege tuition. The plan would cost \$8.7 billion, and in largely intended to help the poor by offering the loans at half a percent below normal interest rates.

Clinton's Defense Secretary Lee Aspin ordered the military to allow women on ships and combat aircraft jobs.

Clinton appointed Lee P. Brown, a former police official, to head drug policy in the U.S. Clinton has said that he plans to turn the "Drug Czar" into a Cabinet-level post.

Clinton proposed a \$1.3 billion plan to develop high-speed railroads between major cities.

Clinton said he would send U.S. forces to end the civil war in Bosnia, and announced that he was willing to do so even without allied consent. Secretary of State Warren Christopher ruled out use of "large numbers" of U.S. ground troops. Clinton has apparently authorized use of covert special operation forces on land. Clinton consulted with European leaders, and they seemed reluctant to use extensive military force. Exactly what sorts of activities the U.S. military will undertake is still undecided, but the main options seem to be air strikes against Serbian artillery in Bosnia-Herzegovina or bombing raids into Serbia. He has not said whether or not he would need congressional approval to take such actions.

Clinton said he would limit his plan for free vaccinations for children to poor families and those without health insurance. Clinton said he would give support to the Iraqi National Congress, a rebel group which is trying to overthrow Hussein. The decision seems to have been partially sparked by a recent Iraqi attempt to kill Bush during his visit to Kuwait.

You should all do your fair share to the country. Ah, ha! I didn't say "Clinton says."

The controversial French abortion pill RU-486 is expected to undergo clinical trials in Oregon, as part of a plan to gain FDA approval. While Bush banned imports of RU-486 for research, Clinton has supported eventual legalization of the pill.

David Koresh's dead body was found. They took him out.

Correction

We have discovered an inaccuracy in last week's article "Laundry Thief Escapes." Security did respond to Heath Hunnicut's appeal for help on the second day, although they admit that they did not respond when called about the first sighting of the Laundry Thief.

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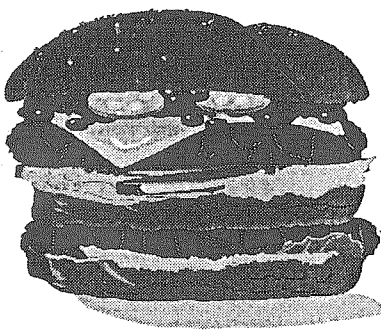


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Doomsday is coming . . .

. . . we have no articles for next week's Tech. Come to the California Tech staff meeting today at 12:15 in the Coffeehouse. Free pizza and beverages will be served.



★★★★★

Pete's

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Greased senior Julius Yang celebrates the proud tradition of Polish freedom during Ricketts' annual observation of Polish Constitution Day Eve.

ASCIT Minutes May 14th

by Karen Shih

Present: BOD, Jennifer Trittschuh (Executive Committee), and nominees for ASCIT appointed offices.

This meeting is partially closed (for interview purposes). Interviews are conducted, and the following offices are filed by these candidates:

Election Chairman: David Derkits.

Publications Darkroom Chairman: Anoop Sinha.

Big T Editors: Christy Esau, Nestor Ocampo, Anoop Sinha.

Activities Chairman (ASCIT Movies Guy): Mike Coward.

Totem Editors: Zack Berger, Hope Chang, Lucy Chen, Joanne Yew.

There were many well-qualified candidates for many of the offices; too bad we could not appoint them all to their desired positions. Thank you for your enthusiasm, and please apply again next year.

BOC Business:

- A revised edition of the Student Handbook will be printed soon.
- Accompanying this edition of the Student Handbook will be a Faculty Handbook, designed to keep faculty more informed.
- Any suggestions for deletions or additions should be directed to Mike Brundage, the BOC Chair.

Lloyd, Blacker, and Ruddock dropped by to get their third term checks for social activities.

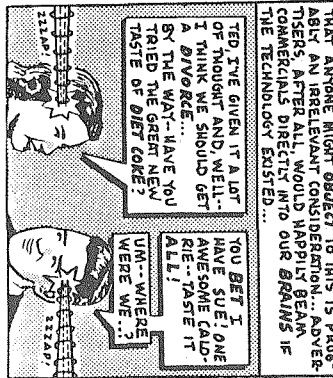
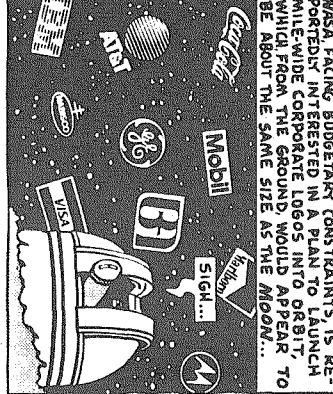
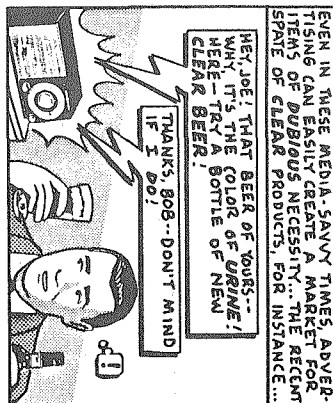
The Big Election Procedure Meeting is postponed until next Thursday, after dinner.

Meeting adjourned at 1:50 A.M.

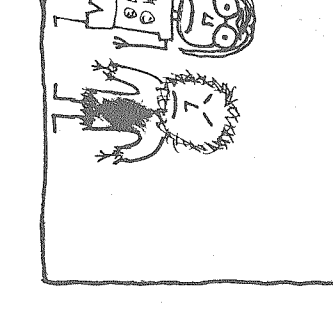
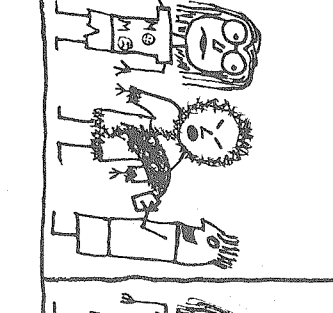
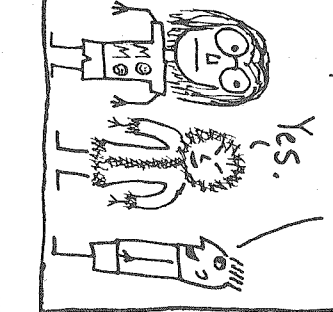
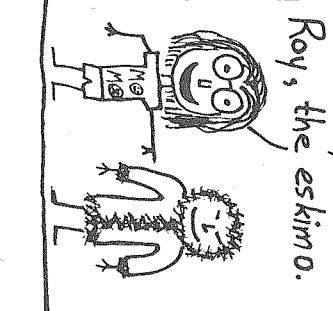
Everything you always wanted to know about AIDS*

An HIV/AIDS education program sponsored by the HIV/AIDS Advisory Committee will be presented in Ricketts House on Thursday, May 13 after dinner. This very informative and interesting program will involve health educators Katrina Hammons and Joel Tan from the All Saints AIDS Service Center, as well as a panel of HIV/AIDS-infected individuals. For information, please call Dinah Lee Schaller at x2961.

*but were afraid to ask



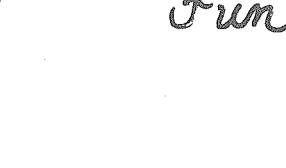
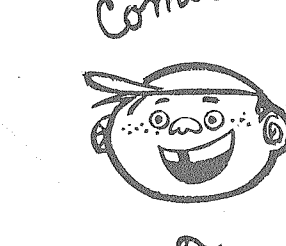
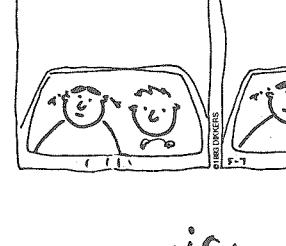
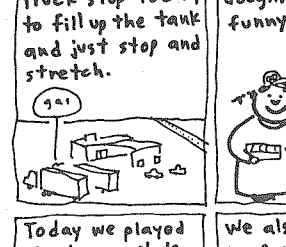
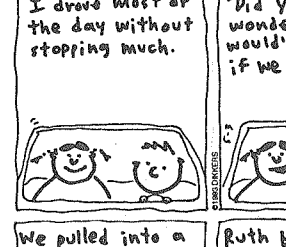
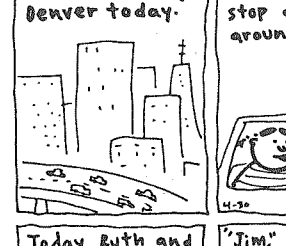
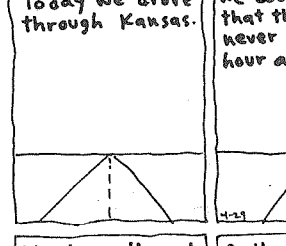
Mike B's MOMO



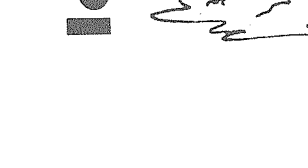
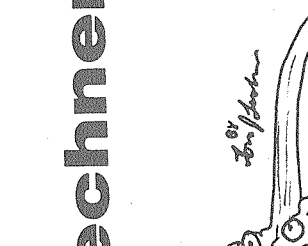
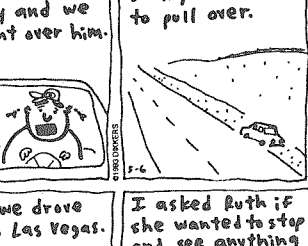
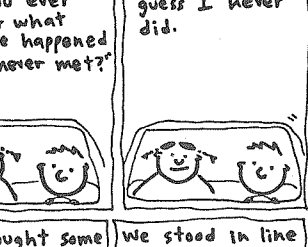
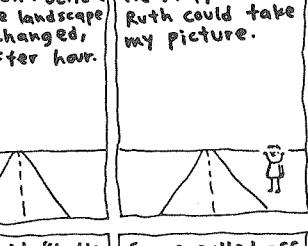
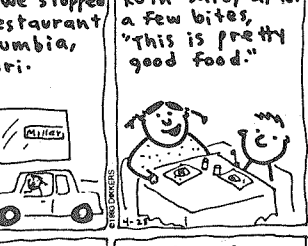
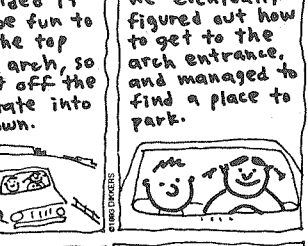
THIS MODERN WORLD

by TOM TOMORROW

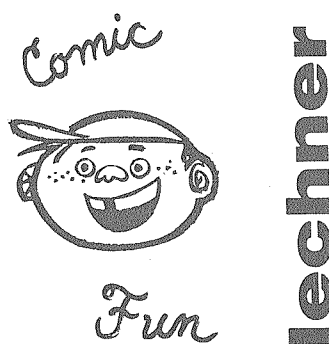
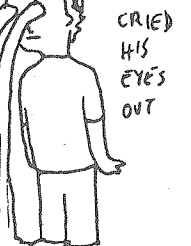
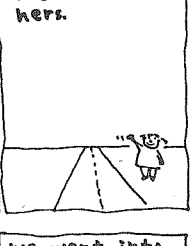
Jim's Journal



by Jim



by Jim



Uneven End to Pasadena Symphony Season

by Andre Yew

What a disappointment. Around intermission, I was seriously considering opening up this review with that sentence. It would have been a bad way for the potentially great Pasadena Symphony Orchestra to end its 1992-93 season. Fortunately, things changed radically after the intermission.

The Pasadena Symphony Orchestra played its last concert of this year's season this past Saturday with a program of Berlioz's "Les Nuits d'Été" and Beethoven's Symphony No. 9 in D-minor. It looked like a promising and interesting program: both works are from the middle Romantic period and both works involve voice and orchestra.

Unfortunately, it seemed that the soloists were out to argue as convincingly as possible that the Berlioz work is an interminable bore. "Les Nuits d'Été" ("Summer Nights") was originally composed as a set of six songs with a piano accompaniment, and then reorchestrated by Berlioz for orchestra later. Plainly put, everyone but the bass mauled these songs with their very obvious boredom.

As many others will agree, the worst thing to inflict upon an audience is an uninspired, boring, lifeless performance. The soprano and contralto, Margaret Morrison and Marvellee Cariaga, respectively, were technically fine, but went through the songs routinely with no emotion. The tenor, Seung-Won Choi, not only wanted to show us how boring he thought his assigned song was, but also how not to project to the audience. Perhaps his inaudibility was due to our position in the Pasadena Civic Auditorium, but I'll discuss this later below.

The high points of the Berlioz song set were the bass, Philip Skinner, and the orchestra. As always, if you don't ask the Pasadena Symphony Orchestra (P.S.O.) to play too fast or too loudly, they will be wonderful. Jorge Mester, the music director of the P.S.O., always manages to draw out incredibly textured and delicate playing from the orchestra. We only have to recall their performances of Ravel's "Mother Goose" Suite and Lutoslawski's Concerto for Orchestra last year. In the Berlioz, they were just as fine, playing with good precision and ensemble.



entertainment

Philip Skinner actually sounded like he enjoyed singing his part and was technically fine as well.

You can probably imagine my mood as I walked out—the Beethoven symphony was going to be horrible. In fact, at this point many things were starting to get on my nerves—the jet engine-like air-conditioning drowning out the softest parts, the coughing and paper-crackling audience, the three zillion smokers puffing away outside during intermission, and the apparent disinterest and posing of the majority of the audience.

When we got back inside, my irritation was quickly dispelled by the opening notes of the Beethoven's D-minor symphony. First of all, it was definitely going to be interesting because Mester and the P.S.O. were taking the first movement about 1.5 times faster than normal. Second of all, it really worked—the tension and mystery of the first movement came out very well. The speed lent the music nervousness as well as movement. There would be quick buildups of themes that would just as quickly be pulled back into the jumble of sound. And when the central theme finally emerges from

the crashing waves of sound around it, the orchestra sounded sure and confident, playing it with quick efficiency.

The second movement, the traditional Romantic scherzo placed second instead of third, was also just as fast. However, Mester made sure not to dismiss this movement's humor by a quick reading. After the first two repeats, Mester made the woodwinds play a note so vulgar, I almost laughed out loud. This was made even funnier when the timpani suddenly returns, almost as punctuation to this joke. It was uncanny how much this interpretation resembled Bartók's Concerto for Orchestra where he ruthlessly makes fun of Shostakovich's Seventh Symphony in the fourth movement. On top of this, the P.S.O. demonstrated their fine technique and ensemble by playing with a tightly rhythmic precision, and they looked like they were having fun.

The third movement is a usually slow and relaxed movement. Mester also took this movement at an accelerated pace, making it into an ever so slightly energetic walk through the woods. Indeed, throughout the movement, I was

constantly reminded of Beethoven's Pastoral symphony (you know, the one Disney clubbed to death, and then some, with LSD centaurs in "Fantasia"). Despite its increased speed, the movement was not rushed. It was as warm and relaxed as ever.

Finally, the famous fourth movement rolled around. The opening is characterized by a gruff statement from the cellos and basses with the rest of the orchestra trying to appease it by first offering a theme from the first movement, then the second, and then the third. Each time the cellos and basses refuse, rudely cutting off the orchestra before it can even complete its statement. There was a sign of doubt when the cellos and basses are almost convinced by the theme from the third movement, but they quickly squash it. Finally, the cellos and basses clumsily offer their idea—the famous theme from the ninth symphony—and the rest of the orchestra picks it up and celebrates. Mester and the P.S.O. perfectly characterized these qualities.

When it looks like everyone's happy, the orchestra suddenly be-

SYMPHONY, page 6

Bridge Without Sam

by Jeff Goldsmith
The Briar Patch

Many books on card play have a chapter on Deception. They usually cover card combinations in which one must drop a high card early to give declarer a losing option. These "Mandatory Falsecards" are pleasing but rare. More advanced books talk about concealing information and deceptive plays of spot cards and equals. The most fun type of deception, however, is making believe that the cards lie differently than they actually do and planting that information in a defender's mind. I like to call these plays "Fictions" because I make up a fictional scenario and lure an opponent to believe my story.

Playing matchpoints in a local game against players who seem to play their cards more or less randomly, I am South.

♠ KQJ4

♥ AJ84

♦ 984

♣ J4

N

W E

S

♠ A83

♥ Q5

♦ Q72

♣ AQ1095

SOUTH NORTH

1♣ 1♥

INT 3NT

I get the lead of the ♥9. First thing I do is ask if they play "Jack Denies" honor leads. They claim that they don't and their convention card is not marked, so this looks like top of a doubleton. At least it's not a diamond. Why did RHO lead a short suit? He must have unattractive leads in the other suits, so his diamonds are probably something like A-J. If I duck this, East will surely win and return a diamond. I'll probably lose the first five tricks then. If the ♠K is onside, though, I have ten tricks, so I am going to try to take them. I win the ♥A and float the ♣J. It holds, but when I repeat the finesse, West wins the King. He continues with a heart. I am prepared for this with a little fiction I've been dreaming up. If I were to play low, East would win the King and be forced to play a diamond because of the J8 heart tenace on the board. To prevent this problem, I "cover" the second heart with the 8-spot and drop the Queen, perforce, under the King. East, blissfully unaware that anything unusual had happened, continues knocking out my heart stopper and I gratefully claim ten tricks for a matchpoint top.

The Caltech Bridge Club meets every Monday night at 7:15 in Winnett Lounge. Everybody is welcome; call Jeff Goldsmith at x2818 for details.

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sports

Broomball

Broomball is back again this Saturday, May 8, 1993 at the Pasadena Ice Center.

Here are the teams:

- | | |
|---------------------------|------------------------|
| 1. Damn Scurves | 6. Team Moosebreath |
| 2. Team Freddie | 7. Larger Than a Truck |
| 3. Flying Brooms | 8. Ice Weasels |
| 4. Ditch Day is Tomorrow | 9. Chicks With Sticks |
| 5. Plaid Thunder Penguins | 10. Cocktosengentens |

And here are the matchups:

12:20-12:40	1 vs. 3	3:15-3:35	3 vs. 4
12:45-1:05	7 vs. 6	3:40-4:00	9 vs. 7
1:10-1:30	2 vs. 8	4:05-4:25	8 vs. 5
1:35-1:55	5 vs. 9	4:30-4:50	semifinal I
2:00-2:20	4 vs. 10	4:55-5:15	semifinal II
2:25-2:45	6 vs. 1	5:20-5:50	final
2:50-3:10	10 vs. 2		

continued from page 5

Symphony

comes stormy again as if refusing the theme. All becomes clear when the bass enters with his famous line (translated to English): "Oh friends, not this tone! Rather let us sing more pleasantly and more joyfully." From here the very enthusiastic Pacific Chorale and the suddenly alive voice quartet from before take over. The orchestra does a fine job of accompanying them, although the extreme speed seems to tax their ensemble a bit.

Perhaps the only part of the performance that didn't work for me was the march with the solo tenor. The pace made the march sound like a high school marching band on overdrive. On top of this, the tenor still did not project his voice very well, resulting in an almost cartoon-like caricature of the march.

Overall, the orchestra and chorus did very well. They were energetic and enthusiastic about the music and delivered it competently. Luckily for the rest of us, the bass had the most solo parts of the voice quartet, and he was very interested and energetic. Also, despite the frenetic speed at which

the music was taken (it seemed like Mester was accelerating as he neared the end), the grandeur and power of the piece was not lost. If nothing else, Mester demonstrated that this was a symphony of joy.

So that all of you don't think I'm a sucker for free tickets (the P.S.O. gives free tickets to reviewers in pretty expensive seats), I have to make some negative comments on the hall. Whatever you do, never sit on the sides of the Civic Auditorium. The entire orchestra sounds off-balance. For instance, my seat (L9) was in the off-center group and I could hardly hear the cellos at all. In fact, some of the basses' gritty sound came through the cellos making the cellos sound horrible. In my opinion, the best seats are up on the balcony—there, the orchestra is balanced and you can hear all the instruments. Also, the ventilation isn't quite as loud. The only drawback is that pianos in piano concertos placed in the center might sound a little drowned out. My advice is to buy tickets from the Caltech Y because they place you slightly off-center in the back of the balcony. The sound from there is quite good—the instruments are clear and have a full dynamic range. And you also don't have to sit with the high-browed socialites.

Men's Track April 30

by Erin Egan O'Brian

After a reasonably successful conference dual meet season posting 2 wins and 5 losses in the SCIAC, Caltech's athletes set many Personal Records (PR's), to give a satisfactory end to the season. Despite the hearty effort, however, CIT could only manage an 8th place finish in the meet, thus placing in a tie for 6th in the conference standings.

Greg Dudey led the Beavers as he competed in six events despite a hamstring injury, and attained "All Conference" status in four of the six events. Coach O'Brian claims that "Dudey doesn't have any quit in him, he's a relentless competitor and the epitome of Caltech Athletics." Besides contributing strong legs of both All-Conference relay teams (4 × 100 m—sixth place and 4 × 400 m—fifth place), Dudey finished eighth in the pole vault (12', 1 1/2"), and eighth in the javelin throw with a PR of 153' 2". Additionally, he ran super preliminary efforts in the 110 m high hurdles (16.70 s—sixth place) and the 400 m intermediate hurdles (58.16 s—fifth place) to qualify for Saturday's final. Dudey's performance gained him the "Caltech athlete of the meet award." Dudey will next compete in the UCSB Decathlon on May 15th and 16th as he attempts to meet the National Qualifying Standard of 6000 points. Earlier this season he scored over 5800 at

the Occidental Decathlon. Coach O'Brian feels he has a good shot at qualifying after working hard over the past couple of months, if he can get his hamstring back to normal.

Another stellar performance came from Junior Ned Bowden, who set a PR in 800 m preliminaries with 1:56.98. He returned the following day to set yet another PR in the final and place fourth with 1:55.45. Bowden also finished 7th in the 1500 m race, with 4:15.10. He made a huge contribution to the 4 × 400 m relay team with a 52.3 s second leg.

The Claremont colleges (Claremont-McKenna, Harvey Mudd, and Scripps) once again dominated the meet primarily with hammer throwers and high jumpers, far out-distancing the University of Redland's talented team by over 40 points. Pomona-Pitzer laid claim to third place, and the scores dropped off considerably for the remaining 5 teams.

Caltech had many notable individual performances:

Matt Goff
110 m high hurdles—16.91 prelims (PR, 8th pl.), 17.14 final

Andrew Zug
3000 m steeplechase—10:20.67 (PR, 8th pl.)
5000 m—16.19.45 (PR, 11th pl.)

Rob Bergeron
100 m—12.04, PR
200 m—24.15, PR

Gerard Ketefian
100 m—12.00, PR
200 m—24.66, PR

Steve Chang
100 m—12.38, PR
200 m—25.06

Roshan Kumar
400 m—55.40, PR
800 m—2:19.13, PR

Ron Stiegar
800 m—2:00.40, PR
1500 m—4:19.90, PR

Schuyler Cullen
800 m—2:08.77, PR
1500 m—4:30.61

Tom Meyer
800 m—2:20.93, PR
1500 m—4:49.40, PR

Seth Blumberg
800 m—2:36.13
1500 m—5:14.88

Mike Pejic
5000 m—17:34.70, PR

4 × 100 m relay—49.76 (despite dropping the baton), 6th place All Conference. Ketefian, Chang, Dudey, Bergeron.

4 × 400 m relay—3:29.30, 5th place All Conference. Bergeron, Stieger, Bowden, Dudey.

Chris Foley
Shot Put—37' 5", PR

Dave Lands
Shot Put—36' 2 3/4", PR

Hsiu Ling
High Jump—5' 11", PR, 6th place All Conf.

Jeff Martin
Javelin—144' 8", (despite a back injury)

Tuan Hoang
Triple Jump—39' 5 3/4"—8th place

Women's Track April 30

by Erin Egan O'Brian

Caltech's Battlin' Beavers showed their true mettle in the highly competitive SCIAC Conference Championship Meet as they performed throughout with their season or lifetime personal records when it counted most. While the individual performances were excellent, it was extremely difficult to break into the top six places to earn All-Conference honors. Amy Oldenburg managed the feat with a heave of 104' 9" in the Javelin Throw, while setting another school record. This was the third time this season Oldenburg set that record out just a little farther.

The meet went about as expected with Pomona-Pitzer winning the title after coming into the event with a 7-0 dual meet record in Conference. Oxy was a very distant second, and a vastly improved

LaVerne Leopard Squad was close behind the Oxy Tigers. Occidental's Becky Kopchick was named "Athlete of the Meet," claiming victories in the 1500 and 3000 meter races, and a very close second in the 800 meter run.

Other notable Caltech performances:

Alice Chan
400 m, 73.44; PR 1 sec.
800 m, 2:56.81; PR 2 sec

Aimee Smith
800 m, 2:35.20
1500 m, 5:27.44
3000 m, 12:02.09; PR 30 sec

Ginger Garcia
800 m, 2:40.81; PR
1500 m, 5:32.98
3000 m, 11:43.85, PR 50 sec

Amy Hansen
400 m, 77.0
Discus, 71 ft.

Pearl Tsun
3000 m, 14:40.88; PR 40 sec

Fatima Ebrahim
1500 m, 6:12.83
3000 m, 13:32.73

Betsy Barton
3000 m, 14:28.30

Taletha Derrington
400 m, 73.0
400 Int. Hurdle, 85.60
Javelin, 92' 2"

Jen Remine
Shot Put, 33' 1.75"; PR

"CIT Athlete of the Meet"
Amy Oldenburg
100 Hur, 20.85; PR 2 sec
Discus, 97' 8"
Javelin, 104' 9"; PR 2 ft

4 × 100 Relay 57.39 PR
(Garcia, Oldenburg, Derrington, Smith—School Record)

4 × 400 Relay 4:50.33 PR
(Chan, Garcia, Derrington, Smith)

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Should the *Tech* continue to distribute *U.* next year?

Send your answer: YES, NO, or NO PREFERENCE, and any comments, by e-mail to u@tech.caltech.edu or by campus mail to

U. Survey
California Tech Newspaper
40-58 SAC

continued from page 1

Conservation

making copies at Graphic Arts. Also, ask the Graphic Arts staff for more helpful information about the use of post-consumer recycled paper.

Water Conservation

If you have been at Caltech over 3 years, you may have noticed that the sprinkler heads used now are different from the "water cannons" previously employed, and that there are fewer "geysers" caused by disembodied sprinkler heads. However, you probably have continued to notice mid-day watering and cool, washed sidewalks. To help solve these problems, a new computerized weather station irrigation system is going to be tested behind the athletic field. The station will be a small hut with sensors measuring humidity of the air and soil, the temperature, and the local weather. Some function of these factors will be used to control the watering system in the vicinity of the weather station. If the test installation of the system behind the athletic field proves successful, the new system should slowly take over the campus, but this is a long-term project. In the meantime, let the Physical Plant know of any malfunctioning sprinklers (x4717), and conserve your own water use.

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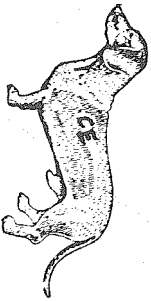
SUMMER EMPLOYMENT—

SUMMER OBSERVERS. There are several positions open for summer employment at the Big Bear Solar Observatory. The jobs involve solar telescope operation, film processing, electronics work, computer programming, etc. Free housing at Big Bear is provided, and cooking facilities are available. There are recreational facilities (boats, etc.) as well. Some astronomy, physics, computer science or electronics would be useful. Positions on campus also available. Applications are available in 264 West Bridge, or can be obtained by calling x4011.

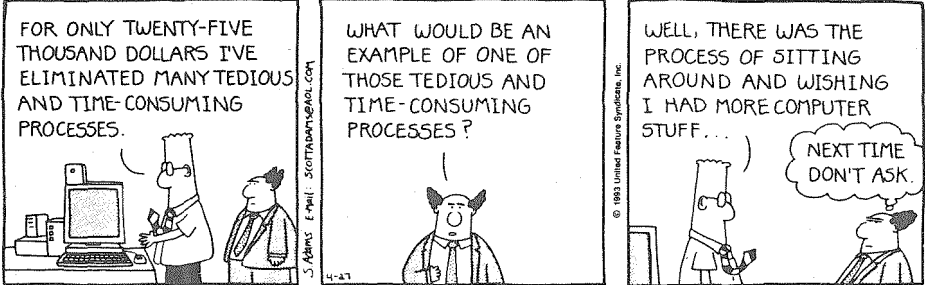
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Send written ad with payment to 40-58. Deadline is 6 p.m., Monday before issue. No charge for on-campus lost & found.

Transportation

Since transportation needs are so varied, there is no campus-wide plan to deal with it. Consider van-pooling or carpooling with a co-worker, or share rides with someone who works near Caltech and lives near your home. You could work out a safe, pleasant bike route to commute to campus under your own power.



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486SLC2-50MHz

>IBM Mother Board
>Math Coprocessor & ETEQ Chip
>4MB Ram up to 16MB
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>1.2 & 1.44MB Floppy Drive
>Conner 170MB Hard Disk
>Paradise Window-Accelerator W/1MB 1280x1024,16.7M Colors,16Bit True Color
>IDE Dual FD/HD Controller
>2 Serial,Parallel,Game Port
>14" SVGA 1024x768 (.28) Monitor
>101 Enhanced Keyboard

CPU	IBM48650	486DX33	486DL33
MIPS	19.4	14.5	11.2
Land mark	114.88	111.5	107.2
Norton	67.7	51.6	54.1

SALE PRICE:\$1465
CASH DISCOUNT: **\$1395**

486SX-25MHz 386DX-40MHz

*128K CACHE RAM
*125MB IDE HARD DISK
*4MB RAM UP TO 32 MB RAM ON BOARD
*1.2MB & 1.44MB FLOPPY DRIVE
*DUAL IDE FD/HD CONTROLLER
*AT I/O: 2 SERIAL/1 PARALLEL/1 GAME
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*14" 1024 X 768 0.28 DOT SVGA MONITOR
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>HP III COMPATIBLE
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>24 Pin Printer
>250 Characters
>10 Built-in Fonts
>2 Scalable Fonts
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AP-3250

>24 Pin Printer
>50 Sheet Paper
>5 Built-in Fonts
>2 Scalable Fonts
\$189

VESA LB 486DX-33/DX-50/DX2-66

*170MB IDE HARD DISK
*32-BIT VESA SVGA CARD 1280 W/1MB 16.7M COLORS
*32-BIT VESA DUAL IDE FD/HD CONTROLLER CARD
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*INTEL 80486 PROCESSOR WITH BUILT IN MATH
*256K CACHE RAM
*4MB RAM UP TO 32MB RAM ON BOARD
*1.2MB & 1.44MB FLOPPY DRIVE
*AT I/O: 2 SERIAL,PARALLEL,GAME PORT
*101 KEYBOARD
SALE PRICE: \$1465/\$1675/\$1840
CASH DISCOUNT: **\$1450/\$1650/\$1795**

ISA 486DX-33/DX-50/DX2-66

*INTEL 80486 PROCESSOR WITH BUILT IN MATH
*256K CACHE RAM
*170MB IDE HARD DISK
*4MB RAM UP TO 32MB RAM ON BOARD
*1.2MB & 1.44MB FLOPPY DRIVE
*AT I/O: 2 SERIAL,PARALLEL,GAME PORT
*16 BIT SVGA W/1MB
*14" SVGA 1024X768(.28) MONITOR
*101 KEYBOARD
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>3 Ports:VGA,RS-232,Printer
>LightWeight 4.7 lbs W/ battery
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>CPU Down Shift Mode
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386SXL-25 \$1395

>Pre-Install Software:
MS-DOS V5.0
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Win-Fax
>4MB Ram up to 8MB
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>80MB Hard Disk(16ms)
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>Built-in Trackball Mouse
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>42 DBA-It's Quiet!
>Laser Quality
\$289
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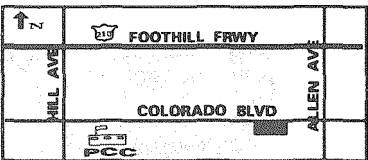
BJ-300

>300Characters/second
>360 DPI
>Epson & IBM Emulation
>Any size paper(Envelopes
A4,Legal,Single sheet,
Transparencies)
>Laser Quality
\$339 Limited Quantity
Ink Cartridge \$25 ea.
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* Note: asterisks indicate new announcements.

Notices

* **1993-94 H&SS Course Schedules**—Preliminary schedules of courses to be taught in the Humanities and Social Sciences during the 1993-94 academic year are available in 228 Baxter.

New Telephone Prefix—effective July 1, 1993, the telephone prefix for all campus offices will be 395 (formerly 356 or 397). All data lines, fax numbers, and private phones are not part of the campus switchboard, and are not affected by this change.

Events and Services

* **May Medieval Movie Marathon**—jointly presented by S.P.E.C.T.R.E. and the Caltech Medieval/Renaissance Society. This is the first of two festivals offered to back up CMRS's May festivities. The June showing will have a more international theme, but this May we feature a British Bias with "Monty Python and the Holy Grail," "A Lion in Winter" (with Katherine Hepburn), "Henry V" (with Branagh), and "The Adventures of Robin Hood" (with Errol Flynn). Begins 6 P.M., Saturday, May 8th in the Cat III Rec Room. Everyone is invited. Some refreshments provided; you are encouraged to bring your own to share. Info: Gorm, 568-9168.

* **The last International Coffee Hour** for this academic year will be held on Friday May 7 at 6:00 P.M. at the Red Door Cafe. The theme will be "Russia: Past, Present and Future". Russian grad students will talk about the changing times in the former Soviet Union. Refreshments native to Russia will be available. All are welcome.

Wanted: Books!—This year's Annual Book Sale is scheduled for Friday, May 21 (8:30 A.M. to 2:30 P.M.) and the members of the Friends of Caltech Libraries are preparing now by collecting new and used, hardback and paperback books from members of the Caltech/JPL community. Please bring your book donations to the first floor in Millikan Library during the week between 8 A.M. and 5 P.M. A special Book Collection day has also been arranged for Saturday, May 8 from 9:30 A.M. to 1:30 P.M. when refreshments, as well as help carrying in donations, will be available.

Caltech Velo—The Caltech Bicycle Club meets Thursday, May 13 at 8 P.M. in Winnett Lounge. The club organizes all types of rides, both road and off-road rides, for all skill levels, from novice to advanced, including collegiate racing. All cyclists welcome. We lead the following weekly rides, all meet in front of Winnett Lounge: Mon 5:00 P.M.: about 20 moderate paced road miles; Tue 3:15 P.M.: various off-road rides; Wed 7:00 A.M.: about 20 hard hilly road miles; Fri 8:15 A.M.: about 15 easy road miles, mtn bikes welcome. Rides leave at the time listed, so please arrive a few minutes early. Info: Michael Kantner x4882 or kantner@hot.caltech.edu (e-mail).

Therapy Group for Caltech students who grew up in dysfunctional families has openings for new members. The group examines the impact of familial abuse, alcoholism, and other serious difficulties on one's current relationships and self-image. Must be able to meet through the majority of the summer. Info: Aimee Ellicott, Ph.D. or Glenn Maarse, M.A. at the Student Counseling Center x8331.

Caltech Y ExComm Meeting—The Y invites anyone who wishes to cosponsor an event to attend on the first or third Monday of each month.

Caltech Hillel/Jewish Community Weekly Meeting—An informal gathering, every Thursday at noon in the Y lounge. For information call Caty Konigsberg at (213) 259-2959.

Friday Prayer—Prayers organized by Caltech Muslim Students are held in the Caltech Y lounge at 1:30 P.M. every Friday.

Mass—Thursday at 8:15 in the Y lounge and Sunday at 10 A.M. in Winnett lounge. Sacrament of Reconciliation (confession) is given 20 minutes before masses. Refreshments are served after mass.

Bible Study and Discussion—Every Wednesday at noon in the Y lounge. Bring your own lunch. For more information call Mike Gerfen at 356-4886.

Open Line—Open Line meets every Tuesday in the Y lounge upstairs during lunch, between 11:30 and 1:00. Topics discussed include developing a youth center for ages 5-12 for tutoring services, activities and cultural development for the children of Caltech students, staff and faculty, developing a multicultural book for the understanding of all nationalities, traditions and customs. Open to all of the Caltech community.

* **OpenLine** is planning a trip to the **Museum of Tolerance** on April 16, 1993. We invite you to come along, and hope you'll bring a friend or two. The cost is approximately \$6, and carpools are forming. If you need a ride or can give a ride, let Gary Mines know. Also, if you have any comments or questions about the Museum, or about the group OpenLine, give Gary a call at x6542, or 577-7816.

* **LA '93 One year later...what has changed?**—an open community forum sponsored by OpenLine. Our panel will include Honorable Rick Cole (Mayor of Pasadena), Shirley Adams (The Urban League), Kathy Imahara (Asian Legal Center), Dr. William Dillard (Pastor, 2nd Baptist Church), Wilbur Smith (Pasadena School District), Oscar Palmer, maybe more. Introductory remarks by Provost Paul Jennings, panel to be moderated by Dr. Alex Norman. Open to all, and your opinions and ideas are welcome. Discussion will focus on what has and has not changed since the rioting of last year; what is the pulse of government; how have the police changed; are they prepared to address problems constructively and effectively; what is the response of education, of the Caltech community in particular? Come voice your opinion. May 19, 1993, Winnett Student Center Lounge, from 11:30 A.M. to 2 P.M.

Baby Furniture Pool—The Caltech Service League loans out baby furniture to students and postdocs on Wednesday at 324 S. Chester from 10 to 11 A.M. For more information call 952-1631.

Entertainment

* **Masters of Magic and Mystery**, featuring Jeff Martin and Ed Alonzo, will be presented on Saturday, May 22 at 2 P.M. in Caltech's Beckman Auditorium. This is a 60-minute Family Faire presentation designed especially for children and their families. Tickets: \$8.50 adults, \$4.50 children; available at the Caltech Ticket Office and all Ticketmaster Ticket Centers (call (213) 480-3232). Info: x4652 (VTDD x4688).

* **The Ethnic Visions film Series** continues with *Boyz N the Hood*, Monday May 10 at 7:30 P.M. in Baxter Lecture Hall. A sensation at Cannes, John Singleton's debut film is a starkly struck realistic urban drama with a powerful anti-violence message. Set in the mean streets of L.A., *Boyz N the Hood* explores the tragedy of black youths caught up in the brutal violence of the 'hood. Open to the Caltech community.

* **Occidental-Caltech Symphony**—performed by Caltech and Occidental Glee Clubs, to include Mozart's "Mass in C Minor" and Liszt's "Les Preludes." Features Allen Robert Gross, conducting, Holly Ristuccia, soprano, Gloria Prosper, soprano, Benjamin Reckdahl, tenor, and Dean Elzinga, bass. Tues May 18 at 8 P.M. at St. Philip the Apostle, Hill St. South of Green, Pasadena. Thurs, May 20 at 8 P.M. at Thorne Hall, Occidental College. Info: x4652. Free Admission.

Capitol Steps Performs at Caltech. The Capitol Steps will perform on Saturday May 8, 1993 at 4 P.M. and 8 P.M. in Caltech's Beckman Auditorium. Their program will be selected from such pieces as "Fools on the Hill," "Pirates of Ted's Pants," and "Federal Excess." The Capitol Steps are a group of current and former Congressional staffers who first began performing their music satire more than ten years ago for a Capitol Hill office party. Tickets: \$30.00, \$27.50, and \$25.00. Caltech students (with I.D.) in advance: half price, or Rush Tickets beginning on Friday April 22: \$7.50. Caltech faculty and staff receive \$2.00 off advance tickets and half-price tickets on Friday April 22. Rush/half price tickets subject to availability. Tickets available at Caltech Ticket Office. Info: x4652 (VTDD x4688).

Angeles String Quartet with Carol Wincenc—This Coleman Chamber Music Concert features works of Mozart (String Quartet in F major, K. 168), Beethoven, and Brahms. Sun May 16, 1993 at 3:30 P.M. Admission: \$12.00-18.00-15.00-12.00; students: \$4.00 off. Info: x4652 (VTDD x4688).

"America's Favorite Places"—Ed Lark will personally narrate this Armchair Adventures travel film, in Beckman Auditorium, Fri May 7 at 8 P.M. Admission: \$8.00 and \$6.50. Info: x4652 (VTDD x4688).

The Pasadena Folkdance Co-op offers beginning and intermediate instruction every Friday at 7:45 P.M. in Throop Unitarian Church on the corner of Los Robles and Del Mar. A program of varied international dances follows the instruction at 9:00 and continues until 11:00. Wear soft-soled shoes. A contribution of \$1.50 is requested.

International Folk Dancing—Tuesday nights in the Dabney Lounge. Beginning instruction starts at 7:30 P.M.; intermediate at 8:00 P.M. and open dancing takes place from 9:00 until midnight. Donations are accepted. For more information call Mike McKenna at (310) 692-0366.

Israeli Folk Dancing—Sundays in Winnett lounge, Beginning instruction starts at 7:30 P.M., intermediate at 8:00 and open dancing goes on from 8:30 to 10:30. For information call Nancy Macmillan at 795-3655. Admission is \$2.00.

Scottish Country Dancing—On Wednesdays in Dabney Lounge from 8 until 10 P.M. Beginners are welcome and no partners are needed. For more information call David Hills at 354-8741.

Music with James Boyk—Pianist James Boyk gives a performance each Wednesday from 4:30 to 6 P.M. in Dabney Lounge. The performance is open to the public and free of charge. Feel free to come late or leave early. For more information call x6353.

Scholarships, Internships & Competitions

For Details on the following announcements contact the Career Development Center, 08 Parsons-Gates, x6361.

RAND will be sponsoring interns in a wide range of academic disciplines in its Graduate Student Intern Program this year. They are looking for applications from students who have completed 2-3 years in Ph.D. study and are interested in the analysis of public policy problems.

Raychem Corporation is seeking undergraduate and graduate level students for Summer Internships. Come to the Career Development Center and check the ASPIRE program or send cover letter and resumé to: Alison Council, Raychem Corporation, 300 Constitution Dr., Mail Stop 111/8201, Menlo Park, CA 94025-1164.

For information on the following scholarships, please contact the individuals listed at the end of each scholarship.

Unique Scholarship Opportunity offered by The Kirby Company. "Makin' the Grade" is a scholarship program designed to offer college students a realistic alternative to dead end summer jobs, with emphasis on time management, communication skills, and professionalism in an actual business setting. Participants work as full-time and part-time independent Kirby dealers during June, July, and August, competing for monthly scholarships. Info: Call (216) 228-2400 or write The Kirby Company, 1920 West 114th Street, Cleveland, OH, 44102-2391.

Mars Institute Student Contest—All high school and college students are eligible to enter the Mars Institute Student Contest. The prize is \$500 and an all-expense paid trip to a Mars-related conference, awarded to the best essay on the years designated topic. This year's topic asks students to discuss the possibility that spacecraft landing and moving about on the surface of the planet Mars could contaminate the surface or atmosphere of that planet, and to propose procedures to prevent it from occurring. Entries to these programs must be received by the Planetary Society no later than May 17. Additional information and application forms may be obtained by writing: The Planetary Society, Scholarships Department, 65 N. Catalina Ave., Pasadena, CA 91106.

The Jewish Family and Children's Services announces the availability of financial support for Jewish individuals and their families. Students may apply for aid by mailing the questionnaire to the JFCS office or calling Ted Schrieberat (415) 561-1226 to receive an application. There are no deadlines and students may apply throughout the year.

The **John Gyles Education Fund** is offering financial assistance to students in both Canada and the United States. Effective March 1st selected students will receive up to \$2500.00. Deadlines vary. A minimum GPA of 2.7 is required. For details and an application send a self-addressed, stamped (US \$29) No. 10 envelope to, The John Gyles Education Fund, Attention: R. James Cogle, Administrator, P.O. Box 4808, 712 Riverside Drive, Fredericton, New Brunswick, Canada E3B 5G4.

For details on the following, please contact the Financial Aid Office.

* **Summer Work-Study**—Information and applications for 1993 Summer Work-Study are available in the Financial Aid Office. If you are interested in Summer Work-Study, please submit the required application as soon as possible, but no later than June 1, 1993. Your entire financial aid application must be completed by June 1 to be considered. Summer Work-Study determinations will be announced as completed applications are reviewed. If awarded, the work-study funding will begin with the July 5th payroll period.

Applications are now available for the **National Hispanic Scholarship Fund**. Students must be U.S. citizen or permanent residents of Hispanic parentage, who has completed at least fifteen units of collegework prior to submission of this application. Students must be enrolled in college for the Fall of 1993 and enrolled in attendance through the Spring of 1994 as full-time, day-time students. The postmark deadline is June 15, 1993.

The **Eboli of Los Angeles** is offering undergraduate scholarships for the 1993-94 school year. The amount of the scholarship is \$3,000 per year paid in monthly checks, September through June. In order to apply, students must be U.S. citizens, L.A. county residents, have at least a 3.25 GPA, and be attending an approved college in Los Angeles County. L.A. county residence may be proven by in-school attendance. All applications and materials are due in the Financial Aid Office by 5 P.M. May 14, 1993.

The **Society of Women Engineers** announces its 1993-94 Freshman and Re-entry Scholarship Programs. This year they are seeking applicants for eight scholarships totaling \$9000. Applications, including supportive materials, must be postmarked on or before May 15, 1993.

The 1993 **Society of Consumer Affairs Professionals in Business (SOCAP)** applications are now available. Individuals planning to work in business, academic, government, or media positions are encouraged to apply. Completed applications must be received by July 1, 1993.

Hot and Throbbing

* **Rivet**—Planning has begun for this year's low-budget edition of the *Hot, Throbbing Rivet*, Caltech's very own compendium of humor and bad taste. The *Rivet*, which will come out as the year's last *Tech*, is widely respected in the publishing world, and resembles the *Nothing*, except that it doesn't suck. For more information on how you can cop the hot, throbbing action, contact the *Tech* office by campus mail or by e-mailing to editors@tech.caltech.edu.



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