Apple Blossom Computer Club
A registered Apple/Macintosh User Group

Aug '09
still only
$2.00

The ROSE BYTER

Next Meeting

Aug 20, 7 PM
American Legion Hall
406 SE Oak Ave

Agenda

1. Meeting starts at 7 P.M.
2. Intro's of members and guests
3. Old business
4. New biz
5. Program: some dis and dat
6. Questions & (maybe)Answers

Baseball

by Jim McClellan <mcclellan@charter.net>

When I was a kid in California many, many years ago I started following the New York Yankees. When I was in high school the Yankees started a farm team in Ventura, where I lived. Of course, I attended many games.

I moved to Hawaii in 1949 and the radio play-by-play broadcasts of games were rebroadcast with someone reading a script. Until I found this out, I was really impressed with the quality of radio. I also attended a few local games when the military teams played local teams. I remember watching Don Larsen, then I believe in the Army, pitch a game or two. This was before his famous no-hitter as a big leager.

Why am I writing this column about something that hasn't anything to do with a computer? Because a year or so ago, I found this website:

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Stuff From Email

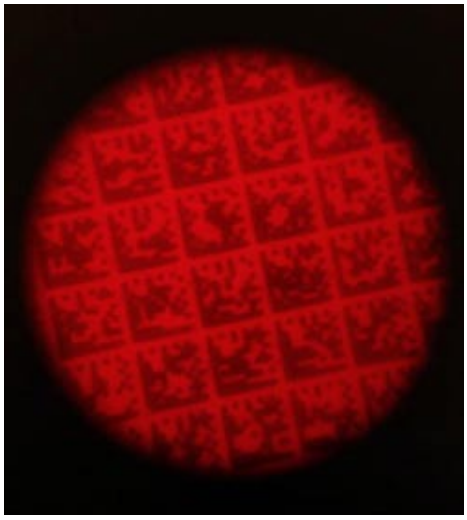
by Walt Pawley <walt@wump.org>

Velozzi proudly releases its much anticipated crossover: The SOLO.

The Velozzi vehicles are being designed and developed to take advantage of the modularity that lightweight materials can provide.

The Velozzi vehicles will be the first production cars to utilize carbon fiber nano tubes, which can improve performance while reducing weight. Most of the materials are reusable, which decreases the carbon footprint.

The SOLO, while spacious like an SUV, will have the performance of a sedan by bringing Formula 1 technologys. The SOLO will be one of the first production cars in the world to use a multi fuel micro turbine battery charger to re-charge their bed of super capacitors and Lithium ion batteries. Regenerative braking will capture kinetic energy when slowing under the control of embedded computers The SOLO will reach 100 MPG, 0 to 60 MPH in the 6 Sec and top speed of 130 MPH.



Using an out-of-focus digital camera, the data stored in the Bokode chip can be easily detected, even from a few meters away. Researchers at the Media Lab at the Massachusetts Institute of Technology have come up with a new kind of very tiny barcode that could provide a variety of useful information to shoppers as they scan the shelves—and could even lead to new devices for classroom presentations, business meetings, videogames or motion-capture systems.

The tiny labels are just 3 millimeters across—about the size of the @ symbol on a typical computer keyboard. Yet they can contain far more

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The **Apple Blossom Computer Club** (ABCC) is an Apple Computer Inc.. registered Macintosh and Apple][family user group. The ABCC publishes *The RoseByter* newsletter monthly which is posted to each paid up member and reciprocating user groups. ABCC participates in user group newsletter content exchange. The ABCC also maintains a WWW site at:

http://www.abccmug.org

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Please understand that materials submitted may not be used and those that are will likely be edited.

Ummmm…

<-1 Stuff from Email

information than an ordinary barcode: thousands of bits. Currently they require a lens and a built-in LED light source, but future versions could be made reflective, similar to the holographic images now frequently found on credit cards.

The name Bokode comes from the Japanese photography term bokeh, which refers to the round blob produced in an out-of-focus image of a light source. The Bokode system uses an out-of-focus camera but can also be read directly by eye, simply by getting very close to the tag.

Graphene's one-atom thickness, planar geometry, high current-carrying capacity, and thermal conductivity suit it to ultra-small devices and components for semiconductor circuits. But one of graphene's intrinsic features is ripples, similar to those seen on plastic wrap tightly pulled over a clamped edge, which can strongly affect graphene's electronic properties. If the ripples can be controlled, they can be used to advantage in nanoscale devices, opening up a new arena in graphene engineering: strain-based devices.

The unusual thermal contraction of graphene had been predicted theoretically. Because graphene is both an excellent conductor and the thinnest elastic membrane, the ripples may profound affect electronics. "This is because graphene's ability to conduct electricity is expected to vary with the local shape of the membrane," Lau said. "For instance, the ripples may produce effective magnetic fields that can be used to steer and manipulate electrons in a nanoscale device without an external magnet."

A pair of baseball-playing robots that can pitch and hit with incredible results have been developed in Japan. The pitching robot, with its three-fingered hand, can throw 90% of its pitches in the strike zone. The batting robot hits balls in the strike zone almost 100% of the time.

The robots don't resemble humans but instead the type of robots on a car assembly line.

Mine shafts on the point of being closed down could be used to provide geothermal energy to local towns. "One way of making use of low-intensity geothermal energy is to convert mine shafts into geothermal boilers, which could provide heating and hot water for people living nearby", Rafael Rodríguez, from the Oviedo Higher Technical School of Mining Engineering, tells SINC. This type of energy, which is hardly used in Spain, is obtained from the internal heat of the Earth.

He and his colleague María Belarmina Díaz have developed a "semi-empirical" method to calculate the amount of heat that could be produced by a mine tunnel that is due to be abandoned. Aside from their predictable energy production levels, geothermal boilers also function practically as an open tube system "but without any risk of heat contamination of aquifers." Using geothermal energy also helps to reduce CO2 emissions, and is not dependent upon climatic conditions. Other advantages are that these facilities make use of a country's own resources, do not require new developments on large sites, do not pollute the immediate environment, and are believed to be profitable over the long term.

Scientists are closer to understanding how to grow replacement bones with stem cell technology. Many scientists are currently trying to create bone-like materials to implant into patients. These bone-like materials could be inserted into cavities so that real bone could meld with it and repair the bone.

So far, scientists have found they can grow small 'nodules' of what appears to be bone-like material in the laboratory from different types of bone cells and stem cells.

For example, the researchers have dis-

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<—Stuff from Email

covered that the 'bone-like' materials that were grown from bone cells from mouse skull and mouse bone marrow stem cells successfully mimicked many of the hallmarks of real bone, which include stiffness. However, they found that the 'bone-like' material grown from mouse embryonic stem cells was much less stiff and less complex in its mineral composition when compared to the other materials.

A low-cost generator with the potential to transform lives in the world's poorest communities is now being tested across the UK and in Nepal. The Score project, led by The University of Nottingham, is developing a bio-mass burning cooking stove which also converts heat into acoustic energy and then into electricity, all in one unit.

Researchers in the Department of Electrical and Electronic Engineering at The University of Nottingham are working on the generator's Linear Alternator — the part which turns the sound energy into electricity. The system uses special configurations of magnets which generate electrical energy from sound. Computer simulations of the linear alternator have proved successful, and test models are currently being constructed in the department's workshops.

Samsung has unveiled a full gesture sensing hologram at shows launching Samsung Electronics' touch-screen multi-media 'JET' handset. The JET presentation provided massive hologram images that appeared, moved freely and vanished according to motions of the moderators' hands, combining a gesture sensing technology that recognizes hand movements from IR rays with the capabilities of hologram presentation and content design.

The interaction engine, D'strict Gesture Sensing (DGS), controls hologram images with motions of hands, and is suitable for public presentation. DGS allows a moderator to extract 17 different hand motions, such as vertical and horizontal move, dragging and rotation, and use them in input mode. Thus the moderator can control hologram images in real time using hands as though they are mouses.

The JET hologram presentation platform brought real life to "Minority Report," a movie in which people control hologram images using only hand motions.

China has banned electro-shock therapy as a treatment for Internet addiction, citing uncertainty in the safety and effectiveness of the practice after criticism in the local media. The Ministry of Health announcement followed recent media reports about a controversial psychiatrist in Linyi, Shandong Province, who administered electric currents to nearly 3,000 teenagers in an attempt to rid them of their Internet habit. Patients are given psychotropic drugs as well as electro-shocks, at a cost of 5,500 yuan ($805) a month.

The Chinese government has led a campaign for over a year against Internet addiction, saying young people's excessive time in Internet cafes, known as Web bars in Chinese, is hurting their studies and damaging family life. The world's most populous country also has the world's largest Internet population, with almost 300 million users at the end of last year, according to the China Internet Network Information Center. Problems caused by Internet over-use are also on the rise, especially among young Chinese seeking an escape from the heavy burden of parental expectations. There are over 200 organizations offering treatment for Internet disorders in China.

The developer of the "electric impact therapy" is Doctor Yang Yongxin, also known as "Uncle Yang," who runs a boot camp called the Internet Addiction Treatment Center at Linyi Mental Hospital, the China Youth Daily said.

Editor's Note: Who defines what is an internet addiction? My wife would say my impulse to play Fallout 3 is an addiction, does that mean I'd have gotten zapped in China? My heart goes out to those poor kids. Why zap someone's brains just because they liked to play on the computer too much for their families' tastes? What's next? We already drug the daylights out of our own kids in school, are some doctors doing this in the USA?

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Chinese citizens are upgrading to battery-powered bikes and scooters to avoid traffic jams and expensive gasoline. China, the world's bicycle kingdom — one for every three inhabitants — is going electric. Workers weary of crammed public transport or pedaling long distances to jobs are upgrading to battery-powered bikes and scooters. Even some who can afford cars are ditching them for electric two-wheelers to avoid traffic jams and expensive gasoline.

Production of electric two-wheelers has soared from fewer than 200,000 eight years ago to 22 million last year, mostly for the domestic market. The industry estimates about 65 million are on Chinese roads. Car sales are also booming but there are still only 24 million for civilian use, because few of the 1.3 billion population can afford them.

"E-bike" riders are on the move in the morning or late at night, in good weather or bad. When it's wet, they are a rainbow army in plastic capes. On fine days, women don gloves, long-sleeved white aprons and face-covering sun guards. One of them is Xu, on her Yamaha e-bike, making the half-hour commute from her apartment to her job as a marketing manager. She had thought of buying a car but dropped the idea. "It's obvious that driving would be more comfortable, but it's expensive," she says. "I like riding my e-bike during rush hour, and sometimes enjoy a laugh at the people stuck in taxis. It's so convenient and helpful in Shanghai, since the

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My Namesake

Both my wife and I were raised, at least in large part, on farms/ranches, she more than me. Despite that, neither of us are accomplished gardeners. Not that we haven't mucked about growing plants over the years. To give you an idea of why this peculiar state of affairs exists, consider that I am rather fond of fruit trees. If this seems puzzling, it's actually very simple. One nice thing about trees is that if you can get them to grow to a critical size, they can pretty much take care of themselves. **Over the years, I've come to realize that doing well with them is not really that simple** (drat) and I've simply been able to enjoy whatever the trees provide – rather like a jumbo squirrel who can't climb trees worth a hoot. But if you watch closely, you may come to believe that even squirrels are not mere opportunists of the high wire ballet stages they chose to play upon. I believe that squirrels plant walnut trees (and most probably oaks, etc., but I have black walnut trees). When I mention this, most people claim they're merely hiding nuts away for eating later. I don't think so, though I've seen them dig black walnuts out of the ground to eat. Black walnuts can have a very long "shelf life" laying on the ground but I doubt this is true of acorns. Still, the care needed for maintenance of fruit trees isn't something that you normally must attend to daily. The same is true for many of the plants we decorate our environment with. But gardening succulent vegetables is not quite so easily dealt with. We're experimenting with using planter boxes, though we do have some other things scattered around. A nice thing about them is the concise definition of where the garden is and how one can work on it from outside the planted area, ie. "outside the box." We're pretty much winging it. Some things are working well. Others not so well. Perhaps the experimenting will teach us how to do better in the future. But one thing is for sure: it's a joy to eat really fresh produce produced right in your yard.

The EPA reportedly is finally getting around to regulating the use of carbon nanotubes. Frankly, I'm amazed it took so long to begin the process ... for two reasons. First, carbon nanotubes are capable of being very dangerous. Second, carbon nanotubes are being engineered into all sorts of things that will be products interacting with consumers. How can something as small as a carbon nanotube be dangerous? Perhaps the main characterization of carbon nanotubes as exceedingly strong, vanishingly narrow, long tubes will suggest a few means to you. For example, a carbon nanotube is thin enough and strong enough to poke right through your cells' membranes. **Like many things, this is neither a "good" or a "bad" property taken all by itself**. It could be used to remedy many sorts of ailments by a number of means. Indeed, efforts are underway aplenty to do just that. But suppose you manage to ingest a puff of nanotubes (many millions ... billions ... or whatever - they are, after all, very small things ... in two dimensions, but they can be inches long ... so far). They could simply float around in you, spearing cells and wreaking havoc. The mutation rate of the cells would likely be increased markedly and the fact that a lot of cells would be dying before their time would increase the reproduction rate, accelerating the effects. For a while, at least, you'd be entirely unaware that anything dire was taking place. Since carbon nanotubes have so many potential benefits, it seems unlikely in the extreme that we won't be surrounded by them in the not too distant future. Done rationally, it may be a great boon with few drawbacks, but the profit motive has a way of defenestrating rationality to fall to its death. Sometimes I wonder if Kurt Vonnegut was not some sort of prophet. While the chemistry of carbon nanotubes is quite different than that of ice-9, a Cat's Cradle scenario may well be in the offing.

I've had some people try to convince me that I should get involved in e-health record systems. I suspect I'd end up doing a much better job – in terms of bang for the buck – than what we're going to soon be fighting with. Why will it be a fight? Well, that's supposedly the American way. I think we call it competition. **The mantra of Americanism chants that competition is good**. I can't really make such a judgment. But I am certain that competition is a very expensive way to develop things and a source of severe disruptions in people's lives. But real competition is not what we'll get with e-HRS. You're being called on to spend about $20 billion to get the ball rolling. This investment will support a number of vendors who'll sell their systems (quite likely as incompatible as they can get away with) to doctors and hospitals. It's estimated that doctors will pay between $30K and $50K to acquire their end of the systems. Why so much? Hey, how can government subsidized corporations make any money if they don't charge large fees? Frankly, if the profit motive is removed from this whole scenario, about the only thing left that is a real bugaboo is peoples' attitudes about "security" of data about

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themselves. Getting some agreement about such matters is like herding cats across a field full of mice. I'm of the opinion such data should be freely available, without restriction. Yeah, I know. That's just terrible. I invite you to attempt to get over it. Here's why. The data WILL be (and is) available to anyone ... if they're willing to pay a vendor for access. And there are some potential benefits from free access to such data, such as independent epidemiological study. Of course, the mere acquisition of first round hardware and software is just the leading edge of the cost being salivated over. Naturally, there will be update services and a requirement to maintain the latest in Micro$hapht's operating system to run the vendor's latest proprietary software. This will entail a constant education of personnel. Ah... a veritable Amazonian flow of money. Besides the likely insane technical aspect of a e-HRS, there's the reason it's supposed to be such a great thing: it's supposed to reduce cost. If what I'm seeing is any guide, this is not something that's going to happen any time real soon now.

Murkinism is all around us! Arrrrggghhhh... Charter runs advertisements day and night to entice people to pay more than their already exorbitant bills for special services. Here's the part I don't understand: **you pay extra per month for this "better" service and get that service for "free."** Actually, I suppose that it's just my unwillingness to accept the notion of buying something with a capitalized name that is utterly without cost to provide so that, as a side inducement, I can also get something of questionable value for "free." I suspect the real purpose of such sales efforts is to place a device in your home that feeds data back to the home office. Unlike Miranda rules, they won't notify you of their intent to use such data against you.

According to some news reports of the day, remaining lunar astronauts are lobbying President Obama to target Mars for future space activities rather than the Moon. This is apparently in response to the notion that we're decommissioning the space shuttles. Perhaps the alternative, one I've heard voiced by numerous people around here, that **we should just quit mucking about in space** hasn't entered their thoughts. But one has to wonder about what the intentions of those in charge are. If we quit flying the shuttles, the U.S. does not seem to have any real alternative waiting to roll to the launch pad. Not that there aren't a number pipe dreams willing to rush right in. Some of them are even amazingly sensible and developed to the point of having reached space already. But none of them is up to the work the shuttles have been doing and the shuttles are very far from adequate craft for going to Mars in anything like a practical manner. So ... is some skunk works preparing a currently secret new vehicle to take over and extend the roll of the shuttles? Interestingly, NASA web site has a page about the remaining planned shuttle flights. One might expect such a send off would point to the "next new thing." It doesn't. Instead, it laments the passing of the shuttle ... period. Further research into NASA's web-site does yield some future vehicles. First on the block is the Ares system. It's supposed to become available four years after the shuttles are retired. Ares does not appear to be much of a departure from classical rocket architecture. While this might be "best," I'm more than a little disappointed that we aren't looking to flying into space rather than continuing to blast into space. There is precedent for flying into space – check out Burt Rutan's efforts. He and Richard Branson are now developing SS2 & WK2 upon which they intend to sell tickets for trips to space. It'll be interesting to see who flies first. Unlike many of my local fellows, I hope we do continue to work on space travel. Nonetheless, a goal like going to Mars must be much more than was our stunt of going to the Moon. We must have learned something from going to the Moon, but that's very unlikely to be enough to justify the cost and risk of stunt landings on Mars. Packing enough peanuts for the trip is a big chore. Packing the necessary equipment to set up housekeeping is, I suspect, something we really do not know how to do ... yet. [Not more than a few hours after writing the above paragraph, I caught a program about NASA plans. Ares, was described well. The rest was primarily conjecture, though real research is going on to create habitat we could move to Mars and survive in. Even efforts to "mine" water and oxygen on the Moon are underway. How practical they are will take some time to find out.]

I find it interesting; the degree to which we make a direct mockery of our own language. Take, for example, statements like, "Nothing is better than that." Of course, we don't really mean what we say. **After all, if nothing were really better, nothing is what we'd choose.** Instead, we mean something quite the opposite of what the words say: "That is the best there is." So, why do we contradict ourselves (normally not even knowing that's what we're doing)? Could the answer be that the statement is the result of the Murkinization of, "There is nothing better than that?" Who knows? Certainly not me. Should we care? Again, I don't know. But I happen to care. It troubles me that we mindlessly warp our language ever deeper into a condition that makes accurate transfer of thoughts from one person to another improbable at best.

"My mom can do nothing normal," says the teenage runaway taking note of a bus full of professional baseball players come to fetch her home. Being normal seems to be the goal of a majority of people in this country these days. Of course, **each person's notion of what is and is not normal is a supposition all their own.** Or so I believe. After all, how many

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<--Water Blogged Wump

of us have taken statistics on the behavior of our peers, converting the non-numerical data into some form of measure so that an estimate of the norm could be computed and reconverted into a set of behavioral rules? My guess is nearly no one. Perhaps simpler is studying the literature of the day purporting to carry out such activities by well funded, highly educated people, who're only to happy to amass all manner of statistics and pontificate at length of what they're supposed to mean. My meager studies of such things has served mostly to provide evidence of the truth of that old adage by Mark Twain: "There are three kinds of lies: lies, damned lies, and statistics." I was going to write that the main thing I could think of that's good about true normalcy is that it would not annoy many other people. However, before I could get started on that sentence, it occurred to me that people who try to be inordinately normal can be excruciatingly annoying. While it's true that extremely abnormal behavior of some can be worse than annoying, it's our differences as well as our similarities that spice up relations with one another. I wonder whether we've lost sight of that in America. Indeed, I wonder if it was ever in view.

Do you buy much on-line? Well, these days, that's not all that much a prerequisite. I've been repeatedly disappointed at what passes for "customer support" in almost any guise. Here's a typical scenario: I need to get a hard drive case. So, I fire up Google and see what's available with the sort of specs I need. One of two outcomes is typical; either there's nothing available at all or there's too much to deal with directly. In the latter case, I go to some distributors' sites I feel reasonably comfortable with. I narrow things down enough to need detailed data. Of course, there's nothing but sales hype at the distributors. I try to look through the "large" images they have to ascertain whether the ports I need are really there or not. Apparently, one seldom needs to know this to make a decision because none of the images show anything useful. But there's a link to the "manufacturer's" web-site's product page. Yeah, right. About half the time, the web-site doesn't even exist. When it does, it's most common that the link doesn't gets to a page about what I'm interested in – usually just the site's home page. If I'm lucky, there actually *is* a product page somewhere on the site. On that page, there's a set of pictures ... the same ones that are on the distributor's page. No matter, there are specs ... yoiks! They're the same, too: useless. OK, so I can check out the FAQ. In the 200 questions, there's not a single mention of my issue ... even vaguely. Indeed, of the 200, 189 are just more sales hype. The remaining 11 cover notions only a clueless noob would have. Guess I'll have to contact the company. Hmmm... no contact data. Nada. Sometimes you can write to <mailto:support@vendor.com> ... which is mostly a black hole. But occasionally, there's an auto-response telling you about the wonderful tech support available at their web-site. Every once in a great while, I bump into a vendor which takes support seriously and really makes an effort to help you buy and use their product. **I worry a little about dying of heart failure from the shock when this happens**.

In keeping with my long established habit of staying up 'til the wee hours of the morning sloshing and stirring bubbling bits in computers, I was mucking about on the Web. The default Firefox home page is a Google search engine form and I've not had any major reason to change from it to something else. So, **when I fired up Firefox, I was presented with a typical window but with blank content**. The little progress whirlygig was whirling its gig with great abandon. The status bar (down at the bottom of the page) showed a nice nearly filled-in-with-blue bar with the explanation that it was contacting some page at google.com. This persisted for some time. Eventually, I stopped it and began to experiment with what I could reach. Apple's site came right up. MSN was not happy, getting part of the way but not finishing in reasonable time. Oddly, Bing came right up. Other sites I tried worked to more or less a degree. The ones that didn't were stuck trying to reference something at Google. In case you're unaware of it, Google has a large number of free services for Web developers to take advantage of. They seem quite innocuous, especially weighed against the result they produce without the developer having to engage the mind to produce it. Lots of Web pages out there in cyberspace will have three or four different Google services referenced. Interestingly, if Google is down (yeah, hard to believe, right), these pages take a very long time to decide to present themselves if they will at all. I've never been a fan of using the "free" services at Google as though they were offered entirely benignly. But I have to confess, my objections didn't include the notion that one's pages might not work if Google weren't cooperating. I've been much more alarmed, and still am, that the "Big Brother" aspect of Google's operation will express itself ever more sternly as time passes. Particularly scary is the passage of the reins of the corporation from the eclectically motivated men who started it to the inevitable group of monetary vultures.

I'm mad as hell … but I'll probably continue to take it long after anyone with half a brain would have given it up. Where are you people? Do you do anything? Aren't you interested in something? Should we be like most and write twenty pages of screen shots about where to click to do what it says to do and parrot how wonderful are all the new Apple features? Frankly, you can get that sort of stuff by the train load elsewhere. Write something! Send it in. **"Do not go gentle into that good night."**

traffic is worse than ever."

The trend is catching on in the U.S. and elsewhere. In Japan, plug-in bicycles are favored. "Many company workers are beginning to use them to visit clients instead of driving, to save fuel costs," says Miyuki Kimizuka of the Japan Bicycle Promotion Institute, a private industry group.

Australians use electric bicycles in rural towns without bus and train service. Tony Morgan, of The Electric Bicycle Co. Pty. Ltd., says he has sold about 20,000 in the past decade, priced at 1,000-2,000 Australian dollars (about $800-$1,600).

In the Netherlands the industry says sales passed 138,800 last year. In India, Vietnam and other developing countries, competition from motorcycles, as well as a lack of bike lanes and other infrastructure, are obstacles. Indian sales have risen about 15 percent a year to 130,000 units, but they are far outnumbered by the millions of new motorcycles on India's roadways.

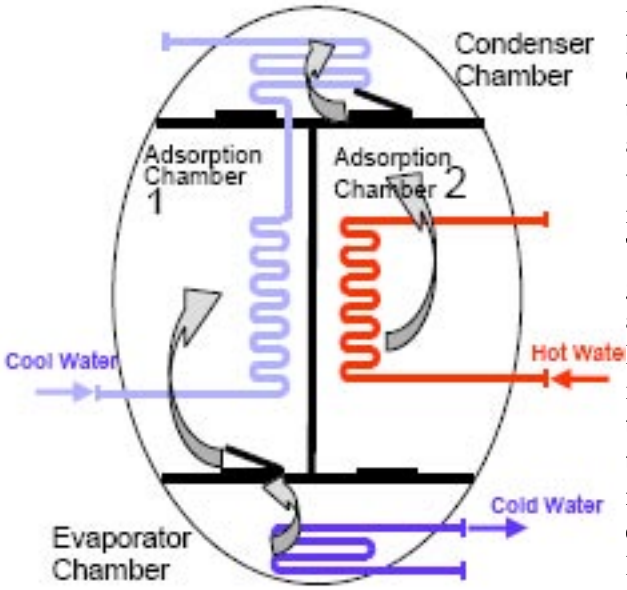
In China, electric bikes sell for 1,700 yuan to 3,000 yuan ($250 to $450). They require no helmet, plates or driver's license, and they aren't affected by restrictions many cities impose on fuel-burning two-wheelers. It costs a mere 1 yuan (15 U.S. cents) — about the same as the cheapest bus fare — to charge a bike for a day's use. They look like regular bicycles, only a bit heavier with the battery strapped on. Some can be pedaled; others run solely on battery. In China, their maximum weight is about 40 kilograms (90 pounds), and maximum legal speed is about 20 kph (12 mph).

Capturing and using waste heat could be one of the largest conservation and green house gas reduction opportunities. The EPA estimates the United States potential for waste heat recovery could substitute approximately 9 percent of the total US energy usage, or 1.4 quadrillion BTU.

Adsorption chillers are driven by hot water rather than from large amounts of electricity like conventional air conditioners and coolers. It may come from any number of industrial sources like waste heat from industrial processes, prime heat from solar thermal installations or from the exhaust or water jacket heat of a piston engine or turbine.

Very little electric power is consumed running the chiller, generally about the same amount of electricity as a handful of old-fashioned incandescent light bulbs. The electric power used drives the internal process computer, a programmable logic controller and an intermittent running fractional horsepower vacuum pump.

Manufacturing accounted for approximately 84 percent of energy-related carbon dioxide emissions and 90 percent of the energy consumption in the industrial sector in 2002. By installing an ECO-MAX adsorption chiller, tons of CO2 emissions will be prevented from entering the atmosphere.



Absorption chiller systems often depend on a corrosive solution of lithium bromide salt. Absorption chillers produce hydrogen gas as a by-product, requiring an expensive palladium cell inside the chiller unit to remove the hydrogen. If the regeneration temperature becomes too hot or too cold, or the conditions change too rapidly for the system to adapt, the liquid salt will solidify and crystallize inside the chiller unit.

Conversely, ECO-MAX adsorption chillers use municipal water as the refrigerant and solid silica gel as the desiccant. There are no CFCs or freons, no Li-Br, and no ammonia. Not using these chemicals equates to no potential for hazardous material leaks, no aggressive corrosion, no chemical testing required, and no damage to upper-level atmospheric ozone.

The principle of adsorption works with the interaction of gases and solids. With adsorption chilling, the molecular interaction between the solid and the gas allow the gas to be adsorbed into the solid. The adsorption chamber of the chiller is filled with solid material, silica gel4, eliminating the need for moving parts and eliminating the noise associated with those moving parts. The silica gel creates an extremely low humidity condition that causes the water refrigerant to evaporate at a low temperature. As the water evaporates in the evaporator, it cools the chilled water.

The adsorption chiller has four chambers; an evaporator, a condenser and two adsorption chambers. All four chambers are operated at nearly a full vacuum.

In the high-stakes game of climate change, the U.S. and other countries are betting on the idea that technology can make dirty coal cleaner. U.S. efforts to develop big coal-fired power plants that push CO2 emissions into the ground instead of spewing them into the atmosphere have stalled. But some CCS (Carbon Capture and Storage) advocates say that new investments in the emissions-reducing

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<—Stuff from Email

technology will push it off the drawing boards and into reality.

A climate bill passed by the U.S. House of Representatives and up for debate in the Senate would provide research money and incentive for companies to work on the technology. President Obama last month announced a $1 billion revamp of the country's flagship CCS research project, a near-zero-emissions coal-fired power plant in Illinois called FutureGen.

If affordable carbon capture and storage technologies can be developed, the prospect is there for 'carbon negative' power plants that burn a mix of coal and wood.

In Manchester, Staffan Gortz, made the case for CCS on behalf of Vattenfall, the Swedish energy giant that has built a pioneering carbon-capture power station in Schwarze Pumpe, Germany. This pilot-scale plant uses the so-called oxyfuel approach to capturing carbon. Nitrogen is removed from the air, enabling the fuel to burn in pure oxygen. This results in a waste stream of virtually pure CO2, ready for capture and storage. Vattenfall and other companies are also investigating two other CCS technologies, known as pre-combustion and post-combustion.

Perhaps the most exciting element of CCS is the prospect of "carbon negative" power plants. These would work by co-firing (burning a mixture of) wood and coal. Since wood is partly made of carbon pulled from the air by growing trees, a CCS power station fueled by a mixture of coal and sustainably harvested wood could actually reduce the amount of greenhouse gas in the air.

<-1 Baseball

http://newyork.yankees.mlb.com/index.jsp?c_id=nyy. Now almost daily, I watch a modified version of professional baseball. It sort of reminds me of the old radio rebroadcast days, except this is virtually in real time. I like it because I can see current stats, etc.

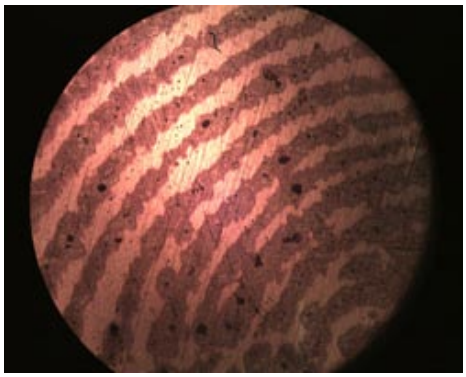
If you are a baseball fan, you might check out the website above. You can even select a different team and if you want to pay a fee, get much more than I do on the FREE site.

I also do similar things with pro football on **http://www.nfl.com** when the team(s) I follow are not on local TV.

Dr John Bond, from Northamptonshire Police Scientific Support Unit and University of Leicester's Forensic Research Centre scientists developed a method to 'visualize fingerprints' even after the print itself has been removed.

Researcher Alex Goddard has uncovered a natural technique that he believes is so simple it has been overlooked until now. Using advanced surface imaging techniques, such as an atomic force microscope, nanoscale observations of fingerprinted brass samples can identify optimum conditions to promote the natural enhancement of the fingerprint, vastly improving their recovery rate. It has also proven that components of the sweat deposit survive washing and wiping of the surface.

"Previous recovery methods include applying powder to the material which



can actually damage the evidence. This new technique promotes a naturally occurring process which does not involve adding anything to, or damaging, the evidence. Instead, it employs heat and humidity to promote the enhancement of the fingerprint image, there are also indications that it could be used after other techniques have failed, perhaps as a last resort."

Third Annual ABCC/ Dogwood Motel BBQ/Potluck

Response to RSVP requests about the headlined outing have been pretty good. Choosing the day was a somewhat wrenching experience since the vote was nearly 50-50!

Remember: ABCC is providing burgers, their buns and "regular" condiments for same and you're supposed to bring a dish, desert, etc. to share.

To find Dogwood, you can use **http://www.dogwoodmotel.com** (it's worth a look at Norman's web site in any case). The time: Saturday, August 22, the fire should be hot at 5 PM. Come early. Stay late. ;-)

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