

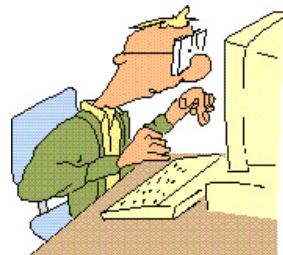
The NEMES Gazette

The Newsletter of the New England Model Engineering Society

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The Editor's Desk

Mike Boucher

Ah, spring, when a young man's thoughts turn to antique engine and tractor shows! After a long winter's hibernation in the shop, its time to take the winter's projects out and start showing them off!

If you look at the Events Calendar this month, you'll find a plethora of engine shows. At the last meeting, we were asked if we were interested in exhibiting our models under a tent at the Orange, MA engine show at the end of June. There was quite a bit of interest. If you're available, I would encourage you to attend.

If you have steam cylinder oil flowing through your veins, another great engine show is the West Campton, NH show. Dave Dearborn is your host, and he has a oil-burning boiler and a steam table for models, as well as several "full sized" engines. Something interesting always appears at that show. Take a drive to the White Mountains the first weekend of June and check it out.

But don't stop there! If there's an engine show near you, get a table, throw some stuff in the trunk, and get out to display it. I've been going to these shows for years, and they're always fun. You'll see some neat stuff, and you'll usually find people who are interested in what you've built.

On a slightly different note, you may notice the absence of Alan Bugbee's "Sea Stories" column.

Next Meeting

Thursday, May 2, 2002

The Charles River Museum of Industry
154 Moody Street
Waltham, Massachusetts

Annual dues of \$25 covers from Jan to Jan.
Please make checks payable to NEMES and send to our treasurer. (Address in masthead).

Missing a Gazette? Send mail or email to our publisher. (Address in masthead).

Unfortunately, Alan is out of stories! Many thanks to Alan for sharing with us.

Finally, in this issue are two stories from members about interesting things they did on their vacations. Summer vacation is coming up. If you're in a different part of the country and find something that might be of interest to the membership, take a few photos and write up a short article. It doesn't have to be long, send it in and we'll see if we can fit it into a gazette.

C'ya
Mike



President's Corner

Ron Ginger

May Meeting

We will return to the Railroad theme with a speaker and slide show on Thursday, May 2. Allan Wiswall has a collection of thousands of slides of steam trains and other steam engines. He has traveled world wide, recently into China, to photograph steam equipment. He will present a show for our group that is about half trains and half other large steam engines. I talked to him a while to set this up, and it sounds like a very good program.

July Meeting

Our regular meeting falls on July 4 this year. Clearly we cannot have a meeting that night, and any attempt to reschedule to another day causes great trouble for all of us. Most important, the museum has to make arrangements with the Mill for our use of the room, and that room has a lot of other users. So, we will just skip a formal meeting on July 4. Sorry to miss a meeting, but I'm sure everyone will find a good event for that day. I assume our newsletter will run as scheduled, but likely the July issue could use some more material from our members since there won't be a meeting report.

Jim Paquette Open House

Jim is holding his annual event on Saturday, May 18th. This has become a "don't miss" event, with everyone bringing items of great treasure to either buy, sell, or both. Remember, not only can you come and look and

buy junk from Jim, you may bring junk of your own to sell or give away. As usual, a good time will be had by all.

[Editors note: See "upcoming events" for more information, including directions]

Internet Mail

Although many of you use this, there are nearly 100 more people that get this newsletter than are on the e-mail list, so maybe a review of the list will be helpful. It works like this. You join (subscribe) to the list with your e-mail address. If any member sends a message to the list, it is automatically forwarded to everyone on the list. If you answer a message, your answer will also be automatically forwarded. It's a great way to keep in touch with the group, and often we get interesting questions, or sometimes good deals, posted on the list.

To join our club list use a web browser and connect to www.yahogroups.com and follow the directions to subscribe to the list named 'nemes'

There is another list related to model engineering that I find very helpful. This is an independent list, maintained by a fellow in New Mexico, but with several hundred members world wide. Many English fellows are on the list, and it has become a very useful source for model info. To subscribe to it you send an e-mail to the address majordomo@swcp.com. In your message just enter one line "subscribe modeleng-list". If you want to get just one big message a day instead of each individual message make that line "subscribe modeleng-list-digest" You will get back a message with all the details for the list. I have met many interesting fellows through this list and always enjoy the messages.

Ron



The Meeting

Max ben-Aaron

The April meeting was opened by venerable Life President Ron Ginger in the usual place at the Museum.

Dick Jones showed a set of bearing scrapers that he bought on Ebay. They are different from ordinary “triangular” scrapers (the kind you make your self out of a worn triangular file) in that the scraper blade is curved. They are designed for use in scraping in babbited bearings.

He also bought a Dorion toolpost. The internal parts were badly corroded so he used a powder deposition attachment to his torch to build the part up again. The repaired part, which he showed looked as good as new; the built-up metal was very hard. Members who are in dire need of a “putting metal back on” tool should talk to him.

Dick Boucher acquired an older numerically-controlled Bridgeport that he modernized by replacing the paper tape reader with a computer, with the help of Ron Ginger. He passed around an aluminum bulkhead for a model car that he hogged out on the machine.

Mike Boucher brought in an article in the “Boston Globe” about watch-making at the museum, featuring a picture of John Lelievre.

The Cabin Fever video deal fell through. Not enough demand.

Earl Rich showed a 3 ring binder full of digital photographs he has taken.

Errol Groff reported that the NEMES website was alive and well.

Ron Ginger donated a whole bunch of “Modeltec” magazines to our lending library.

Bill Lopoulos told us about the trials and tribulations of the Central Mass. Steam, Gas and Machinery Association, in their quest to acquire a permanent exhibition site. They have plans to include a model-making section at their exhibition and it looks like we might have yet another venue for exhibiting our models. Their website URL is:

www.cmsgma.com and Bill's e-mail address is: bloupoulos@aol.com.

You may recall that at our last “Show and Tell”, Steve Peters had a demonstration of the Lego “Mindstorms” system, which incorporates a computer, motors, gears and sensors and allows the user to build simple robots.

The Road to Mindstorms

Our April speaker was Fred Martin, who talked about his involvement in the design of the Lego system, “Mindstorms”, and how he came to be involved with its design. It was a virtual tour through some of the history of robotics over the last 30 years or so.

Fred started out mentioning Don Norman's book, “The Psychology of Everyday Things.” This seminal book reveals how things in our everyday world are designed without regard to the user. For example, doors that have a bar all the way across, so you can't tell which side has the hinge, and hence where you should press to open them.

Many years ago, an electronics magazine, “Popular Electronics,” published what might be the first article on amateur computing: the design of the “Cosmac ELF”. Fred became fascinated by this article, even though there was no way that he could have built the machine. But the article gave the details of the op-codes used by the processor, so he made do by learning to write “virtual” programs in assembly language, even though he could never run them.

In time, his father, impressed by this feat, bought a Radio Shack TRS-80 for him. It was a lot of fun in the beginning, but, he found, for him it had a serious shortcoming: there was no way to interface the computer to the “real world” -- to get it to turn a wheel or activate a switch. This was frustrating.

Yearning to do something in robotics, he enrolled at MIT, choosing the Department of Computer Science.

There, he had a chance to work in the Artificial Intelligence laboratory with a group of medical engineers who were building a robot mechanical arm which moved up and down. It had a spindle at the end, so it could be thought of as an “active tool”, with the part fixed and the tool moving. If the part were fixed to a similar robot arm, the degrees of freedom could be partitioned between the two robots. There was not enough power to do much harm, but it was imperative to respect the contraption and keep out of the way.

When he graduated, he decided that he would like to work with robots that interacted with humans. He encountered Seymour Papert, who was Co-Director of the AI laboratory in the 1960's. At that time, members of the AI Lab really believed that they were pioneering the way to develop intelligent machines.

In an era when computers were limited to a single user at a time, the Computation Department of MIT was in the midst of fostering interactive computing, culminating in Project MAC -- Multiple Access Computing, commonly known as “time sharing”.

Papert had studied with Jean Piaget, a renowned Swiss psychologist who had discovered that children learn about the world in a sequence of discrete steps, and they react to situations in terms of their current models. Papert held the then heretical (i.e. absurd) notion that children could learn to program computers and he wanted computers to become creative tools for all, especially children.

Programmers at that time usually interacted with the computer via decks of punched cards. Papert thought that interacting through a teletype would be more fun. He wrote a book "20 Things to do with a Computer". He envisaged a computer that could control motors, lights, sounds and sensors. One example was to write a program to manipulate motorized marionettes in a puppet show. Another was to solve the problem of balancing a yardstick on the palm of one's hand, given a means of measuring the angle that the stick deviated from the vertical.

Papert's “Killer Application” was a system called the “LOGO TURTLE”. LOGO is a programming language. The Turtle was a robot that looked like an inverted trashcan and which incorporated a motor that allowed it to either move forward or to spin in place. This simple system enabled “Turtle Graphics” -- a form of relational geometry. The formula for generating a square, say, would be to:

1. move forward
2. rotate 90 degrees
3. repeat steps (1) and (2) three times.

This system represents a “Procedural Geometry”: not descriptive (what it is) but procedural (how to do it).

At this point in time, graphic terminals became available so the next logical step was to replace the mechanical turtle with one that “lived” on the screen. (This was before the invention and widespread acceptance of the “mouse” we are all now familiar with.) The challenge now was to create a new type of expressiveness, increased animation and reintroduce robotic aspects.

Papert now met the head of the Danish LEGO Company, a company with a vested interest in amusing and educating children. LEGO sponsored him and they began to cooperate in the development of the first system, which was marketed to schools in the USA under the name “LEGO tc logo”.

This (1986) is where Fred was brought in to explore the possibilities of providing a computer that could be embedded in models which could be programmed, by children of all ages, to make them do interesting things.

The first attempt had a computer about the size of a juice box and a battery of similar size. It had the equivalent of the guts of an Apple II (but no screen). The toy had a motor, motor control and sensors. This prototype was called the “LEGO BRICK” and it recreated the old Logo Turtle.

The next generation contained an embeddable computer and a control board and was intended to allow users to emulate Woody Flower's famous course, in which students were given a box of parts (each student got the same set) and challenged to use them to make a robot that performed some pre-ordained task, with a winner chosen by having the robots compete with each other.

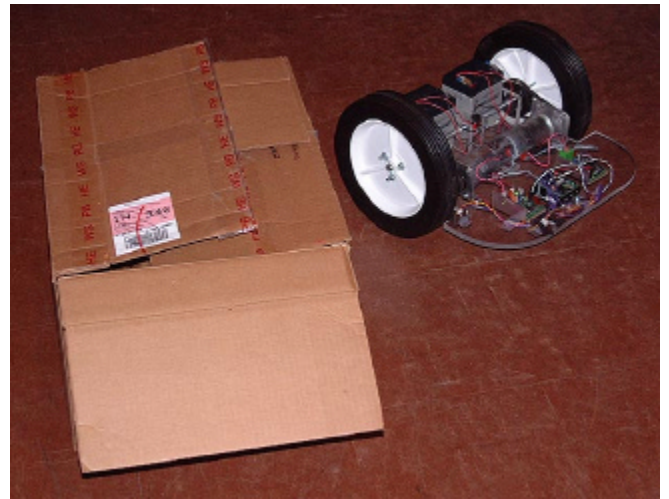
The dominant idea was to make it easy for users to create robots to, for example, play Pong or hockey. For Fred, this task was the realization of his old dream, to have the system that he would have liked to have when he was young and starting his career in computing. In the process, he has been interacting with an intensely creative group of teachers in Rhode

Island who share Papert's old goal of making computer programming available to children.

Since then, Fred has left MIT to found his own company, Gleason Research. Fred brought a sample of one product, the "Cricket". The Cricket is a small control board that takes care of the low-level technology needed. There does not need to be a steep learning curve. The Cricket sells for \$50.

The meeting ended with a demonstration of a robot built by Randy Gamage. This robot, named "Lex" because it's built from a sheet of Lexan plastic, moved around and was able to avoid an obstacle. It was controlled by a single Cricket, and used two custom PID motor control boards that Randy designed to interface with the Crickets. Lex used two Sharp GP2D12 infrared ranging sensors to detect obstacles and move around them. One sensor faces forward, and the second faces to the right side of the robot.

Randy put a cardboard box in the middle of the floor, and the robot traveled around the box, keeping a relatively constant distance away from the box. Since the robot could only sense objects to the front and right side, it traveled around the box in a clockwise direction.



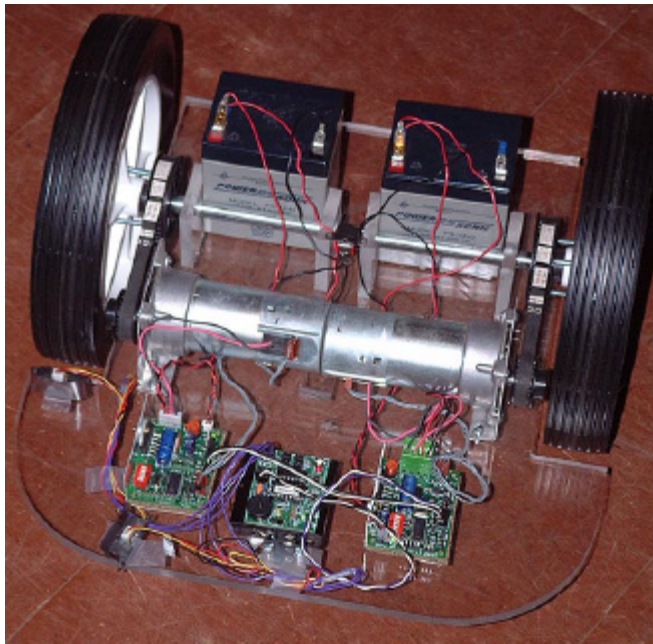
Robot circumnavigating a cardboard box. Earle Rich photo.

For NEMES members who wish to enter into and participate in this fascinating field, Fred's company, Gleason Research has a web site which gives more information on the Cricket. You can find out more on the Net by accessing

<http://gleasonresearch.com>

Max

[Editors Note: Fred assisted the writing of this article by confirming details and adding more technical information than Max was able to get at the meeting. Thank you Fred!]



Close up of robot. Earle Rich photo.



Climbing the Sydney Harbour Bridge

Rob McDougall

One interesting experience my wife and I had, apart from being exposed to much deadly wildlife in the Outback for 10 days, was our climbing of the Sydney Harbour Bridge (English and Australian spelling of Harbor).

An enterprising individual in Australia took 10 years to get the necessary approvals from the State Government of New South Wales, after years of rejections, to set up his bridge climbing business.

He and two other investors spent \$20 million dollars over that period before generating one dime of income - now I think that takes vision. Today, he and the

other 2 owners take 800 people (average) a day up and down the “top of the coat hanger” (as the bridge is affectionately known to Australians) 363.5 days a year, from 4:00 am to 12:00 midnight).

Recent ascendants include Will Smith, Chelsea Clinton, and the members of New York Fire Department. The cost is AUS\$150 per person - so you do the math. Those three have created a proverbial gold mine.

It takes about one hour to get ready to go onto the bridge. They batch climbers into groups of eight with an assigned team leader per group.

To do the climb you have to strip to your underwear and put on the supplied track suit (in change rooms, thankfully). All of your personal stuff goes in a locker and you take the key. Even watches and jewelry have to be taken off - they scan you afterward to make sure. Nothing can be taken or worn on the bridge that could be thrown off - including camera equipment of course.

After the track-suit, they have you put on a safety harness - similar to a rock climber rig. This in turn has an interesting round buckle device (invented in England for sailors) that attaches to a safety steel rope that you never get detached from as you climb and descend the bridge. Its design allows it to cross joints without coming off. You also are rigged up with a one-way radio and ear set. This is so the team leader can check on each person from the front and explain interesting factoids as you climb along. With the wind up there, it would be impossible to hear anything otherwise.

We were also supplied with rain gear that we wore in a belt pack. Also you get a handkerchief that gets strapped to your wrist, a black head cap and a head light for getting back down during the night and through a tunnel. Everything on you is strapped and hooked to either the track-suit and/or the harness.

There is also a drill you have to go through before practicing stair climbing and sliding the safety harness buckle along the safety rope through joints.

To do the climb, we had to climb many steel ladders which were mostly caged affairs, but some were just open with hand rails. On the bridge itself you climb up one side of the left hand arch (looking at it from the Opera House) across the very top where the flag flies, and down the other arch. When on the arch, it is about

8 feet wide with no gaps below. There are steel steps and railings to hold onto. You never feel unsafe. I found the most unnerving part was walking along the steel mesh gangway before getting to the arch. This is the part to the left of the arch underneath the roadway that is part of the suspended structure. Looking down between your feet, it is about ten stories to the ground and harbour waters.

While on top of this magnificent structure with a view to die for - we found out the following interesting facts:

- The bridge was completed in 1932, after 6 years of construction
- Sixteen people died doing so
- It contains 6 million rivets - all put in by hand
- The arch is allowed to rise or fall 10 inches due to heat or cooling effects, on huge hinges at each end of the arch
- When it opened it cost a car six pence to cross. A horse and rider was 3 pence. These days a return trip costs two dollars twenty and horses and riders are banned. You can walk across free and you are allowed to bicycle in a special lane
- To get an idea of comparative size, Ayer's Rock is over two times taller and if placed on top of the Sydney Harbor Bridge would completely cover the central business district on both sides of the bridge. I have now climbed both and find it amazing that Ayer's Rock “felt” smaller to me than the bridge.
- When the bridge was designed and started it was intended to be the biggest in the world. The American's got wind of this and, not to be outdone, built the Bayonne Bridge in NY one foot longer and one week earlier
- The bridge is under constant maintenance every day of the year with a crew of over 100 people from all trades. Today it is spray painted as they go along, but until recent years, it was hand painted. The most famous Australian to have been a member of the hand painting crew back in the 1960's was Paul Hogan (before he was known).

It's 3 hours from front door in to front door out. Of that, about 45 minutes is getting dressed and trained and 30 minutes is undressing and picking up your photos at the photo shop. The guide takes many digital photos of all and sundry during the climb.

One last interesting tale, only one person has been known to have jumped off the bridge and survived. An Irish rigger took a bet that he could jump off and live. He was a skilled high diver and apparently jumped off heading for the water feet first. He took a large spanner with him on the way down and just before hitting the water, thrust the spanner at the water below, piercing the water surface with the spanner first. He then plunged in at 200 miles per hour.

Apparently he just barely survived. They said the doctors found that the soles of his boots had welded themselves to the skin of his feet and the leather uppers had to be peeled off his groin area (ouch!). Several broken bones later, he lived to tell the story. I am not sure if the moral of that story is to always carry a spanner when climbing bridges or to always wear good strong boots on bridges or simply, not to jump off bridges.

Rob



Olympic Steam

Mike Boucher

For the week of February 19th-24th, I had the privilege of attending the 19th Winter Olympic Games in Salt Lake City, Utah. One of the sites was called “Soldier Hollow”, just outside of Heber City, Utah. This venue hosted cross-country skiing, Nordic combined, and biathlon.

Nordic combined is a two-part event combining 120 meter ski jumping and a 7.5 kilometer cross country skiing sprint. The starting order of the sprint is based on the distance traveled in the ski jump. I attended both days of this event.

Heber City is also home to the Heber Valley Railroad. In 1899, the Denver and Rio Grande built a line between Provo and Heber City. The rail line was a steep, curvy track through Provo canyon. It was not a quick trip, and the nickname “Heber Creeper” was bestowed on the line. In the late 1960’s construction of highways into the valley and through the canyon caused the line to be abandoned. In 1970, a sizable percentage of the line was opened as a tourist line.

Recently, the State of Utah purchased the line, keeping the tourist train in business.

Parking at the Soldier Hollow site itself was quite limited. Most spectators were bussed in from a satellite parking lot a couple of miles from the venue.

The rail line passed within ¼ mile of the Soldier Hollow site. The Salt Lake Organizing Committee (SLOC) and the Heber Valley Railroad (HVRR) arranged to carry spectators to Soldier Hollow. Those of you who know me will not be surprised to learn that I took the train. There were three trains to the venue each day, and two returning after the day’s event was completed.

The HVRR normally operates with two Baldwin Loco Works built 2-8-0 locomotives. To ensure they would always have a steam engine available for the trains, they “borrowed” an Alco built 2-8-0 from the Nevada Northern railroad. That alone was a feat as the HVRR has no connections. The locomotive had to be brought in on a flatbed truck. All three engines were under steam for the duration of the Olympics.

The event I was attending started at 10:00AM, so I purchased tickets, in advance, for the 9:05 train from Heber City to Soldier Hollow

Karen and I arrived in Heber City just in time to watch the 2nd train of the day departing the station for Soldier Hollow. This train was powered by Nevada Northern #93. Bright blue skies, snow covered mountains, and white clouds of steam coming from the stack made quite a scene.

After picking up our tickets, we waited for our train to come into the station. The locomotive used on that train was HVRR #75, which has been used in over 30 movies and TV shows.



HVRR train at Heber City. Mike Boucher photo.

When the train started boarding, most people went into the coaches. Karen and I went into the caboose. We rode to Soldier Hollow in the cupola of a former Union Pacific caboose. As the locomotive always faces Heber City, we looked out the cupola directly at the smoke box front and stack of #75.



View from the cupola. Karen Barry photo.

20 minutes later, we got off the train at the newly created Soldier Hollow station. A horse drawn sleigh was waiting to take us directly to the front gate.

After the event, won by Samppa Lajunen of Finland, we took the reverse trip: horses to the station, and #75 back to Heber City.

I had been told that a man I know through live steaming was volunteering at the HVRR for the Olympics. At Heber City, I found him hostling on HVRR's Union Pacific #618. After getting a Guest

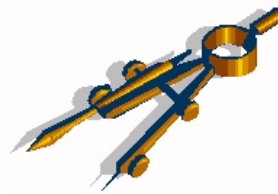
Pass, John invited me up into the cab. There was around 180 psi showing on the pressure gauge, he let me open the butterfly doors to look at the fire, and we had a short conversation about the locomotive

After leaving the loco, we took a quick tour of the shop. The two-track shop is in a fairly modern steel sided building. The machines I noticed were several large lathes, including a wheel lathe that looked like it could handle 60" wheels. There were also smaller lathes, including a Monarch that was about 3 times the size of a 10EE. There were milling machines, drill presses, but they were across the shop and I didn't get a good look at them. After all, this is a working shop!

As Karen and I had another event to get to that afternoon (4 man bobsleigh), I didn't get too much time to poke around the rest of the museum. I did notice that they had two turntables behind the shop, awaiting the railroad to build a pit to install them in.

All in all, it was a great way to get to Soldier Hollow. Someday I hope to return to the HVRR to take the full 3 hour trip into Provo Canyon.

Mike



CAD for the Home Shop

Bob "Mac" MacIlvaine

We've seen how to draw lines, rays and infinite lines in previous columns. Drawing a line from scratch is great, but, very often you need to modify it once it exists. This time we'll look at some of the functions we can do to existing geometry.

To begin, draw a line. Now find this icon on the tool



bar. This is the icon for the parallel command (you can also type the command *parallel*). Use this function to draw a line parallel to another line at a given distance or through a selected point. By default it expects you to enter a distance, if you hit the enter key instead, it will prompt you to select a point. It will draw the parallel line through the selected point. Then you are prompted to select an entity, then to select which side to draw the parallel line.

This is probably a good place to talk about pre-selection. If you put the cursor over an existing entity and left click, the ends and mid point of the entity will be highlighted with little squares. This entity is now pre-selected. If you now put the cursor over one of the handles (the squares are called handles) and hold the left mouse button down, you can drag the end points to a different location. The mid point handle will drag the entire entity. In the case of a circle or arc the handles at the quadrant points change the radius and the center handle moves the entire circle.

With an entity pre-selected, if you right click, you get a pop-up menu of typically used commands. You'll see things like the parallel command, move, delete, etc. Whether you select the command from this menu, the toolbar, or type it in, the command assumes you want to work on the entity you already selected. This is convenient sometimes, other times it doesn't. You can select multiple entities as well. Sometimes this makes sense for an operation other times it doesn't.

One thing to remember: with some commands, pre-selection doesn't make sense and the command will force you to select the entity even if one was pre-selected. **Be careful**, any entity that is pre-selected is deleted when you hit the delete key or the *delete* command. The pre-select status of an entity remains until the action of a command changes it or until you specifically unselect it. Unselect by left clicking the entity again or hitting the Esc key until no handles remain.

(Note: if you zoom in, there can be pre-selected entities outside the current zoom window. If you do a delete, they will be deleted and you won't know until you zoom out, at which point, it may be too late to undo.)

Before we end this column let's talk about two other useful commands: *trim* and *extend*. As always these can be typed or selected from the right click pop-up.

The icon for trim is  and for extend .

The action of these commands is obvious; the use is less so. In the simplest case, these commands expect you to select a bounding entity and an entity to extend/trim to the bounding entity. The first selection is the bounding edge. The second is the entity to be extended/trimmed. You can continue to select entities

at this point and each entity will be extended/trimmed to the bounding entity.

These commands offer the option to select all entities as the bounding entities. This can be handy, but in a dense drawing, it can have some surprising effects. It can also take time, since the program has to search through more data to determine which entities to use as the boundary.

Simple extends/trims are very useful. In many cases you may want to extend/trim to an implied edge. For instance, if you have a line going through the open area of an arc and would like to trim the line to the implied circumference of the arc. Choose *Edge mode* (type *e* and hit enter) when prompted for the entity to trim and then *Extend* (type *e* again and hit enter). Then select the entity to trim. It will be trimmed to the implied circumference.

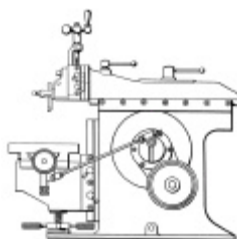


- A. Select the cutting entity.
- B. Specify to trim the entity using the edge mode, and select the entity you want to trim.

Result.

If you have questions about the things we've covered so far or about CAD in general, feel free to contact me. My email is suemac@empire.net.

Mac



Shaper Column

Kay Fisher

Pete Verbree's Alba 1A – Part II

By Pete Verbree (aka Shapeaholic)

The story about Pete Verbree's acquisition and reconditioning of a 10" Alba 1A shaper continues. Last month, Pete told the story of how he found and purchased the Alba. This month, reconditioning commences.

First job: disassemble the machine. Those looks like 9/16" bolt heads... nope, must be metric... nope wrong again... British Standard Whitworth! English right? None of my wrenches fit! I guess it's dial-a wrench time!

Well, the disassembly progressed over the day and as I worked, I marveled at the standard of the workmanship that I saw. I also despaired at the abuse that someone had heaped upon this once fine machine. Piece by piece her story began to reveal itself.

The slide ways and feed screws had seen little use. Very little backlash in the screws and lots of scraping marks still visible. A little Varsol revealed an asset tag from the University of Western Ontario, in London Ontario. A good sign! She never saw a production shop.

More cleaning, more disassembly. Then I saw it!



Cracked Clutch Housing photo By Pete Verbree

The clutch housing was cracked, badly! "DOH!" As Homer would say, "That might be a problem!"

Continuing with the disassembly, I removed the link arm (ram lever) from the ram to allow the ram to come off. Oh brother, that isn't original. My kids could make a better repair job than that!



Damaged Ram Lever photo by Pete Verbree

The reason for the cracked clutch was obvious: someone had crashed the machine, breaking the original ram lever, tearing a large chunk out of the stroke adjustment slot on the bull gear, and cracking the clutch housing.

Memo to self: When inspecting potential machine purchases, leave rose-colored glasses home! So, there it was. My "find" was turning to scrap before my very eyes! What to do, what to do? As this was getting on toward suppertime, I came into the house and went to wash up. "How is your new friend?" came a polite inquiry from the supervisor's office (kitchen). "Pretty good" I answered trying to keep the despair from showing in my voice. "It is going to take a little more work than I thought, but it's in relatively good condition."

Now, having been married to the same person for 22 years has given my wife some insight into my moods and general demeanor, so the conversation during supper was steered to other topics.

I spent the next couple of days doing some research into the possibilities of buying replacement parts. The usual sources in the US couldn't help. Several inquiries via email to the UK found parts all right, but the cost of exchange and shipping added to the purchase price would have driven the cost to a point beyond economics.

I would obviously have to repair or fabricate what ever I needed. I spent the next night scheming and plotting my next moves. I will describe those repairs next month.

Kay



Treasurer's Report

Rob McDougall

Below is a combined treasurers report for both January and February. Unless otherwise noted, all items are from January.

Balance as of: 01/31/2002	\$4,594.22
2002 Dues Received	895.00
Refreshments Stand at Show	427.17
Cabin Fever Bus Fee Rec.	110.09

Proceeds from CD Sales	100.00
Donations	25.00
Interest Income (Jan)	.53
Interest Income (Feb)	.69
<i>Less</i>	
Gazette expense (Jan)	-222.73
Front door security (Jan)	-50.00
Copies for Show	-54.60
Flier Paper	-7.49
Flier Printing	-16.00
Other Show expenses	-197.50
Gazette expense (Feb)	-185.38
Front door security (Feb)	-50.00
Balance as of: 3/31/02	\$5,369.00

Rob

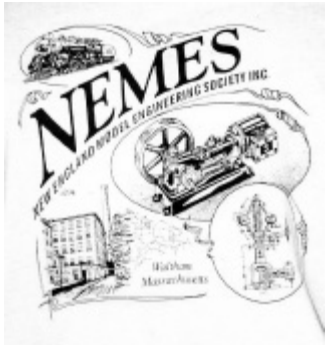


NEMES clothing

NEMES Tee Shirts

NEMES tee shirts are available in sizes from S to XXXL. These are gray short sleeve shirt, Hanes 50-50. You won't shrink this shirt! Artwork by Richard Sabol, printed on front and back.

Artwork:



Rear



Front

Prices:

S, M, L, XL \$12.00

XXL \$14.00

NEMES Gazette

XXXL \$15.00

Add \$5 shipping and handling for the first shirt, \$1 for each additional shirt shipped to the same address

Profits go to the club treasury.

Mike Boucher
295 River St
Waltham, MA 02453-6007
Bandm3714@attbi.com

NEMES Sweatshirts

The saga continues... Originally, I had said we were placing a sweatshirt order after the March meeting, based on pre-orders. That didn't happen, as we only had four people put their names on the list.

We still have only 10 orders, and that's still not enough. I'm looking for a minimum order of 20-25 sweatshirts. If you want one, let me know!

We do not have a firm price on the sweatshirts, as we don't have a firm quantity. Expect the price to be between \$20 and \$25 per sweatshirt, XXL and XXXL will probably be \$2 or \$3 extra, just like the tee shirts

Like the tee shirts, profits will go to the club treasury.

Mike Boucher
295 River St
Waltham, MA 02453-6007
Bandm3714@attbi.com



For Sale

Metalworking Books on CDs

I found three old books and three new books on the web. All are in the public domain and had good information on using and maintaining metalworking tools. The old books are high-resolution scans, so they take up a lot of bytes. It took me hours to download them from the web, so the best way to make them available is by CD-ROM. Here are the titles on this CD-ROM:

- Modern Machine Shop Practice Vol I, Joshua Rose 1887
- Modern Machine Shop Practice Vol II, Joshua Rose 1887
- The Advanced Machinist by William Rogers 1903
- Machinery Repairman - US Navy 1993
- Fundamentals of Machine Tools - US Army 1996
- Welding Theory and Applications - US Army 1993

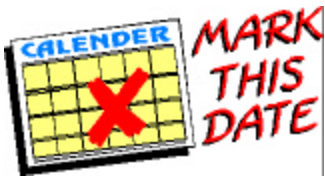
\$5.00 shipping included. Profits go to the club treasury.

Bob Neidorff
39 Stowell Road
Bedford, NH 03110
Neidorff@TL.com

Shaper Work CD

Put out in 1944 by the New York State education Department this 326 page manual is chock full of valuable tips and information on using the King of Machine tools....The Shaper. Covered are everything you need to know about the care and feeding of the shaper, use of the shaper, even how to sharpen tools for the shaper. Scanned and saved in Adobe Acrobat format. \$5.00 shipping included.

Errol Groff
180 Middle Road
Preston, CT 06365 8206
errol.groff@snet.net



Upcoming Events

Bill Brackett

Thursday May 2 7PM - NEMES Monthly club meeting

Waltham, MA. Charles River Museum of Industry (781) 893-5410

May 5 - Dunstable engine show

Dunstable Ma. Jay Wilkie (207) 748-1092

May 18 - Jim Paquette's open house

9:00 am - 2:00 pm Rain or Shine

114 High St Uxbridge, MA 01569 (508) 278-2203

High Street is off route 122 (South Main Street) 0.2 miles south of the intersection of routes 16 and 122 in Uxbridge center. Jim's shop is about ½ mile up High Street on the left. Watch for the signs.

Feel free to bring items to sell, trade or give away.

Coffee and Donuts for the early birds!

May 18-19 - Cranberry Flywheelers Engine Show

Eadaville RR David Moore (508) 697-5445

May 18-19 SSAAC antique auto parts swap

Tweeter Center (formerly Great Woods) off route 495 in Mansfield Ma

May 19 9AM to 2PM - MIT Flea Market

Vassar St, Cambridge, MA (617) 253-3776 9-5 m-f.

May 21-23 - EASTEC

Eastern States Exposition Grounds, West Springfield, MA. <http://www.sme.org/eastec>

May 25-26 Bernardston Engine Show

Rt 10 off RT91 Bernardston, Ma Vickie Ovitt (413) 648-5215

May 26 Fiddleheads & 4x4s Spring Festival

Owls Head Transportation Museum.

May 27 - Oct 31 - 10AM 5PM American Precision Museum

Windsor, Vermont

<http://www.americanprecision.org/Default2.html>

June 1-2 - GSG&SEA West Campton Show

Campton NH, Dave Dearborn (603) 726 3257

June 6 Thursday 7PM - NEMES Monthly club meeting

Waltham, MA Charles River Museum of Industry (781) 893-5410

June 8-9 - Hinsdale show

RT 119 Hinsdale NH. Douglas Wood (802) 254-6758

June 8-9 - Skowhegan Show

Skowhegan State Fairgrounds,
Skowhegan, ME. Joe Kelly (207) 862-2074

June 8-9 - Granby Show

Dufresne Park, RT 202 Granby, MA
(413) 648-5215

June 9 - Rod & Custom Auto Show

Owls Head Transportation Museum.

June 16 9AM to 2PM - MIT Flea Market

Vassar St, Cambridge MA (617) 253-3776 9AM –
5PM M-F.

**June 15 & 16 - Pioneer Valley Live
Steamers Fathers Day Meet**

Southwick, MA

<http://www.pioneervalleylivesteamers.org>

June 23 - "Bill van Brocklin meet".

Wauhakum Live Steamers Holliston, MA

<http://www.steamingpriest.com/wls>

Mike Boucher (781) 893-3892

June 23 - Big Three Showdown

Ford, Chevy, and Mopar Meet. Owls Head
Transportation Museum

June 29-30 CMSGMA Show

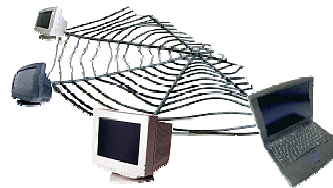
Orange Airport, Orange MA. Dave Songer (978) 544-
5295

July 4 NO MEETING THIS MONTH!!

Enjoy the fireworks and BBQs

To add an event, please send a brief description, time,
place and a contact person to call for further info to
Bill Brackett at wbracket@ultranet.com or (508) 393-
6290.

Bill



**Web Sites of
Interest**

Gleason Research

This is the web site for last month's speaker, home
of "the Cricket" and other robotics equipment.

<http://gleasonresearch.com>

Lego Mindstorms

<http://mindstorms.lego.com/>

Heber Valley Railroad

<http://www.hebervalleyrr.org/>

Long Now Foundation

The Long Now Foundation is developing a 10000 year
clock, which will chime once a year! See photos of a
model of the clock which will be gigantic in it's final
form.

<http://longnow.org/10kclock/hillisgen.html>

[Editors note: How do they test it to make sure its
really working?]

Boat Hull Design Software

"Hullform" – boat hull design program. Several
different versions, including freeware, shareware, and
"professional Edition" which you have to purchase.
The more you spend, the more features you get.

<http://members.iinet.net.au/~bluep/>