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May 2022

President's Corner

We're Back

Thanks to David Jenson, we have a printed newsletter again. This is our best way to provide a consolidated update on policy changes, facility improvements and upcoming events. I hope you take the time to page through the letter as it does take a bit of effort to put it together and get it to our current and past members.

BRIDGEWIRE BOARD AND OFFICERS

Eric Bradford	Board Chair, President, Secretary	775-750-8299	ericbradford.pe@gmail.com
Ryan Bibbey	Board Member, Treasurer	775-830-5604	rbibbey@gmail.com
Lee Elliott	Board Member	612-703-4226	sendleemail@gmail.com
Mark Pipes	Board Member	702-532-6450	mark.pipes@scientificgames.com
Loren Montague	Board Member	925-864-7506	themontashu@gmail.com
OPEN POSITION	Education Officer		
OPEN POSITION	Facility Officer		
OPEN POSITION	Marketing Officer		
David Heit	Membership Officer	775-342-8686	oldblue6bt@gmail.com

Contact one of the above if you have questions or comments. Please also find an opportunity to thank them for their service to Bridgewire!

TASKS THAT NEED TO GET DONE REGULARLY

Additionally, our community needs everyone to get involved and help run the place. The alternative is we will need to raise rates and hire services. **Are you helping with any of the following items?**

Claim one with your name _____ on the copy on the bulletin board.

1. Gov – perform role of President **Eric B.**
2. Gov – perform role of Treasurer **Ryan B.**
3. Gov – perform role of Secretary **Eric B.**
4. Gov – perform role of Facility Officer _____
5. Gov – perform role of Education Officer _____
6. Gov – perform role of Membership Officer **David H.**
7. Gov – perform role of Marketing Officer _____
8. Tres – Perform QuickBooks bookkeeping **Outsourced**
9. Tres – Manage Budgets _____
10. Tres – Prepare Annual Financial statements **Ryan B.**
11. Sec – Manage and safeguard all Bridgewire records **Eric B.**
12. Sec – File legal and regulatory documents **Eric B.**
13. Sec – Record meeting minutes **Eric B.**
14. Sec – Maintain Office supplies of paper, pens, batteries, labels, printer inks, etc. **Eric B.**
15. Sec – Maintain Office supplies of toilet paper, paper towels, cleaning supplies **Eric B.**
16. Sec – Maintain Office supplies of Kitchen utensils, plates, cups, etc. **Eric B.**
17. Fac – Woodshop, Dust collection, Check small vacuums before each use_____
18. Fac – Woodshop, Dust collection, Check central vacuum before each use _____
19. Fac – Woodshop, Dust collection, Check and empty table saw cyclone _____
20. Fac – Sweep floor electronics Lab _____
21. Fac – Paint Booth – replace filters regularly _____
22. Fac – Paint Booth – Replace paper and cardboard walls and wipe down _____
23. Fac – Flam Cabinet – Sort out old paint, solvents, and adhesive for recycling _____
24. Fac – Woodshop curtains-wipe down_____
25. Fac – Woodshop overhead air filter, clean or replace filter _____
26. Fac – Woodshop sort wood remnants and trash unusable mat'ls and sizes _____
27. Fac – Laser sort through remnants and cut down to usable rectangles _____
28. Fac – Kitchen, Clear out Refrigerator at 1st of every month _____
29. Fac – Kitchen, Clean oven, toaster, and microwave as needed _____
30. Fac – Kitchen, Vending machine, purchase and maintain stock items **Wesley M.**
31. Fac – Kitchen, Clean counters, fixtures, and mop floor_____
32. Fac – Restroom, Clean Star wars bathroom fixtures and mop floor _____
33. Fac – Restroom, Clean Calvin and Hobbes bathroom fixtures and mop floor _____
34. Fac – Media Room, wipe down tables and vacuum before every open house _____
35. Fac – Empty all 30+ shop trash cans into main trash cans on Thursdays_____
36. Fac – Metal Shop, thoroughly clean drill press and bandsaw of chips _____
37. Fac – Metal Shop, clean lathe pan of metal scrap shavings _____
38. Fac – Weld shop, grinding corner clean up dust and reface the wheels _____
39. Fac – Tools, maintain Battery powered tools and batteries _____

40. Fac – Tools, maintain full sets of all metal and wood drills and cutter bits _____
41. Fac – Fasteners – regularly organize, consolidate, and purge _____
42. Fac – Computer, maintain all computers with upgrades/software updates _____
43. Fac – Asset Mgmt. _____
44. Fac – Lease Mgmt. _____
45. Edu – Teaching a class in electronics _____
46. Edu – Teaching a class in wood shop _____
47. Edu – Teaching a class in welding _____
48. Edu – Teaching a class in machine shop _____
49. Edu – Teaching a class in laser _____
50. Edu – Teaching a class in 3D printing _____
51. Edu – Class development and quality control _____
52. Mktg – Website management _____
53. Mktg – Social media management _____
54. Mktg – Promotional material generation and placement _____
55. Mktg – Event coordination _____
56. Mktg – Brand management _____
57. Mmbr – Teach class in New Member Orientation **David H.**
58. Mmbr – Create SWAG for New Member Orientation **David H.**
59. Mmbr – Manage member database **Eric B.**
60. Host – Open house host and tours **Mark P., David H., Eric B. + _____.**

Bridgewire Newsletter

I am your new editor of the Bridgewire newsletter. The content of this newsletter will depend greatly on the contributions from the members of Bridgewire.

Those involved with the repair or enhancement of existing equipment or the acquisition of new equipment, please email me with the information, with pictures if possible. Also please notify me if there is equipment that is not fully functional, so we can let the members know.

I always found that one of the most interesting parts of past newsletters was finding out about what other members are doing with the Bridgewire facilities. Send me an email about what you are doing, everything from a short note to a long description.

We are adding a section where members can recommend vendors that have been helpful with their projects.

Also a section where members can describe items they would like to dispose of, either for free or for payment, and where members can describe things they are looking for.

Let me know what else you would like to see in the newsletter.

Please feel free to contact me by email at davidwjenson@gmail.com.

Bridgewire Activities

Cleanup and Maintenance Day

A successful cleanup and maintenance day was held Saturday, April 23, hosted by Ryan Bibbey. Most of the items on the long list of tasks were handled by those who attended. Many thanks for those who came. We still have items that need to be completed. The next session is scheduled for Wednesday, May 11, 6-8 pm. Please reserve the date to help us get closer to completing our task list.

Ryan Bibbey changes a light bulb.

Reggie Bolden cleans in the metal shop.

Dan Plattus cleans in the wood shop.

Roman Hruska and Craig Bergland change a filter in the paint booth.

Aaron Ginn vacuums an air duct.

Facilities Updates

Wood Planer – Recently it had many fixes and improvements. The burned-out motor reset switch was replaced. The worn feed roller bearings and drive chains were replaced. Thanks Brendan! We also added an inline Oneida cyclone dust collector at the machine. This collector should be emptied before and after each use because it fills up quickly. This will keep our primary dust collector from filling too quickly and will cost less.

Painting Area Lights – Recently we added high lumen lights over the painting area so that it will be easier to see paint and stain details and flaws in your work. This should provide members with greater success in their projects.

New 3D Printer – We have added a printer with high end features. Most important is we have an emergency fire suppression system so you don't need to be present while it prints. We have added OctoPrint and Spaghetti Detective so you can observe and manage your print anywhere from your phone. Lastly if you are familiar with 3D printing, you don't need to take a class. We have an instructional video on the computer and step by step instructions on the wall. This Creality Ender 5 Plus has a huge build volume of almost 14in. x 14in. x 16in., a self leveling bed, an enclosure for better heat control, and now Tungsten hardened steel nozzles for filaments with carbon, glass and other additives. The primary software is Ultimaker Cura. Come check it out.

Wood Lathe Improvements – We now have a very nice Grizzly Lathe with a speed indicator on loan. We also have a Supernova2 chuck and multiple jaw kits. To support our lathes we have a dedicated grinder with Wolverine grinding jigs and fixtures for sharpening the Bridgewire lathe tools. To use the equipment you must successfully complete a class in the proper use and safety. We need a regularly available instructor.

Contribute Cash (without spending extra money)

If you are purchasing something from Amazon, go to smile.amazon.com instead of amazon.com, and select Bridgewire to support. It doesn't cost you anything, and benefits Bridgewire with a portion of your purchase price.

Member's Activities

We need Bridgewire member's input for this section. Email to davidwjenson@gmail.com a short or long note about something interesting you are doing using Bridgewire facilities.

Craig's Solar Corner

Craig and his friend Luther made a great video about his solar projects. Go to youtube.com and search for 'Craig Bergland' to see a video interview about Craig's solar projects.

Embedded Systems Group

Matias Landers described the high school physics project he is working on. His experiment will verify the relationship between the velocity of an object and the kinetic energy it possesses. His project uses a steel ball that rolls down a ramp and through a light gate to measure its velocity. It then impacts a spring. The distance the spring compresses is measured with a distance detector. All this is tied together with an Arduino processor.

The group also discussed the implementation of an equipment lockout system. The system will allow Bridgewire to control access to equipment that is particularly dangerous to the operator or the equipment to those trained and authorized to use that equipment.

Heat Treatment of Metal in the Paragon Oven

The Paragon oven in the hot metal shop is normally used for glass and enamel work. Because of its high temperature and close temperature control capability, it is also suitable for heat treating small metal objects. Dave Jenson had the need to anneal some ball bearings, so that they could be machined. They are made of 52100 alloy steel, which incidentally is commonly used by knife makers. The normally recommended procedure for annealing this alloy takes many hours of controlled heating and cooldown. There is an alternative process called **Divorced Eutectoid Transformation Anneal** that just takes a few hours. See https://knifesteelnerds.com/2019/05/13/how-to-heat-treat-52100/. The Paragon oven is ideal for this process because of its ability to be programed for various heat up rates, hold time, and cool down rates. By putting the part in a stainless foil packet and purging it with a little argon from the TIG welder, the creation of scale is minimized.

Want or Surplus?

What do you have taking up space that you no longer want or need that you are willing to either sell or give away free? Conversely, what do you need for one of your projects that you think another Bridgewire member might have or know where to get?

Email me the information at davidwjenson@gmail.com and I will post it here.

You can also take any kind of electronics or electrics to New2U Computers at 50 E Greg St., #103, Sparks. Depending on the items, they will refurbish for use by others or recycle responsibly.

Helpful Vendors

Do you have a favorite vendor for the kinds of things Bridgewire members need? Let me know and I will post the information here. Tell me what you like about them. Here are just a few to start things off.

Mastercraft Hardwood Lumber Inc.	1460 Linda Way, Sparks	775-356-1772	Ordinary and Exotic hardwoods
Johnson Bearing and Supply	515 Vista Blvd, Sparks	775-359-1049	Bearings and rollers

Member Responsibilities

Who Dunnit?

Inspector Policy is our house detective. He is always on duty looking for rules violations which disrupt the peace and fair maker environment. He lives by the maker credo "Be Excellent to each other". Each month he will ask for your help to identify a rules violator.

This Month's Case: "Pushed off a cliff"

All of our yellow component bins are resting on angled shelves of a modified bookcase. If you push the bin back too far it will fall off the back of the shelf. It could create a mess. If this happens to you, you should recover the bin and clean up its contents.

Inspector Policy was called in because someone pushed 2 bins off the back and just left them there. This is extremely rude to our community of members to think "oh well, some other lowly member will clean that up for me". That is beyond unacceptable. The attitude that you don't need to clean up your mess and fix your mistakes is a slap in the face of every member. As a member of this community, if you see someone act in such a way, you are empowered and encouraged to confront the offender to correct their actions. If they can't act responsibly, we don't want them here.

Inspector Policy

Education Happenings

Bridgewire Classes and Workshops

We are looking to have members create and teach classes of their own. All Bridgewire classes will charge a fee of $15/hr. per student. If a materials fee is required it can be added to the total cost. The instructor will receive 50% of the class fee from Bridgewire. The class must be listed on our calendar no less that 30 days before the class. The instructor determines class length in hour increments and the min and max number of students required. Talk to Eric to get a class template and learn more.

Final Notes

Clean up for the cleaning crew?

We're back! and strict hygiene rules are in place. It's important that we pay attention to our workspace and be sure to consider the other members who come after us. Bridgewire's industrial cleaning service will again be doing a terrific job of keeping the shop tidy, safe and dust free. We can all help them focus on the deep cleaning aspects of their job by keeping work areas organized and sanitized and cleaning up after ourselves. Let's not forget that Bridgewire is a co-operative facility that relies on member participation to maintain the facilities while keeping an affordable fee structure. This service frees us to spend more time on infrastructure issues. There's plenty of need for repair and maintenance of the tools and equipment.

New Members

So far in 2022 we have added many new members and seen several return. The following is the chronological addition of our new members this year. Stephen G., Aaron G., Christina C., Leeroy C., Joe R., Daniel V., Steve W., Andrew E., Ralph S., Xiao X., Ashley R., Sam C., Shannon M., Reggie B., Jesse S., Liz T., Daniel L., Matias L., Joseph M., Elijah H., Evelyn N., Dan B., Matt R.

Welcome to Bridgewire and we hope you find the organization inviting and fun.

Bridgewire Calendar

BELOW Click on “Calendar” to go to the Bridgewire calendar with interactive event details.

Thu, Apr 28	Open House Night (6 pm - 9 pm)
Thu, May 5	Welding and Plasma Cutting (7 pm - 9 pm)
Fri, May 6	New Member Orientation class (6 pm - 8 pm)
Sun, May 8	Mother's Day
Wed, May 11	All members - shop clean and maintenance day (6 pm - 9 pm)
Thu, May 12	Open House Night (6 pm - 9 pm) Sheet Metal and Machine Shop (8 pm - 9 pm)
Tue, May 17	Inventors Meeting (4:30 pm - 6:30 pm)
Wed, May 18	Bridgewire Laser Cut & Etch Basics (6 pm - 8 pm)
Thu, May 19	Open House Night (6 pm - 9 pm) Wood Shop (6:05 pm - 8:05 pm)
Sat, May 21	Armed Forces Day 3D CAD - Fusion360 (Basic Modeling) (9 am - 1 pm)

Tue, May 24	Embedded System Group (ESG) (6 pm - 8 pm)
Wed, May 25	BB&BS Event -Woodshop (5 pm - 9 pm)
Thu, May 26	Open House Night (6 pm - 9 pm)

ALL MEMBERS: If you would like to add an event. Email us at info@bridgewire.org or click on the button below the calendar to schedule your event with details and contact info. The new event will be approved by an officer or director to make it show up. Your events can be any project you want to share or get help with.

Add Event

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Calendar