

September 2016



Welcome to HacDC's first monthly newsletter, intended to keep members and guests informed of all the things going on at HacDC. This is a work in progress, so please do make suggestions and add content for the next edition.

The **HacDC Amateur Radio Club (HARC)** operated just across the White House's South Lawn in celebration of the National Park Service's 100th Birthday. We operated 20 and 40 meter ssb and cw from NPOTA # DZ10 "The White House". A special callsign of W3H was issued for this event.



On September 25th, HARC will be at the Silver Spring Maker Faire noon to 5pm, operating the KM3KID demonstration HF and VHF amateur radio station at the KID Museum booth. HARC meets at HacDC on the second and fourth Wednesday nights of the month. There are also Saturday study sessions for those interested in getting their Amateur Radio license as well as regular Ham Radio breakfasts on Saturday mornings at The Coupe.

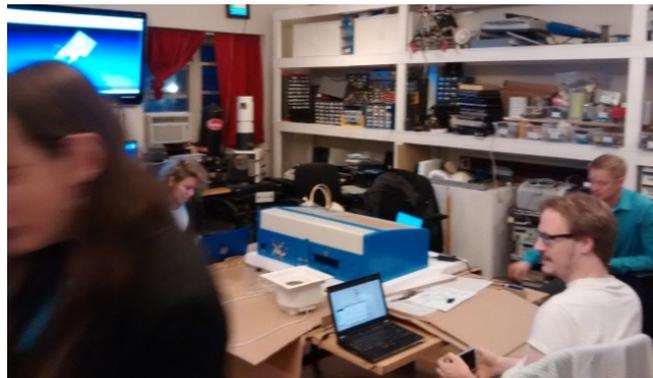
Project SEM is in the process of purchasing an upgraded vacuum gauge, an MKS MicroPirani 925. The electron microscope's built-in gauge will not operate above 10^{-5} atmospheres and currently doesn't appear to operate at all. The new gauge will operate across the whole range from atmospheric pressure down to 10^{-7} atmospheres and will help us diagnose any vacuum leak or troubleshoot the SEM's built-in gauge. Stay tuned for the next SEM Workday.



Project SpaceBlimp team has been meeting nearly every Tuesday evening. An October 8th launch near Strasburg, VA has been targeted as the jet stream worsens later in the Fall, threatening to carry SpaceBlimp further than we would like (and possibly into the Washington DC no-fly zone). Progress has been rapid with the balloons purchased, enclosure, radios, GPS and cameras selected and on-hand and parachute testing taking place last weekend. Launch and chase/recovery teams are coming together now. Contact spaceblimp@hacdc.org.



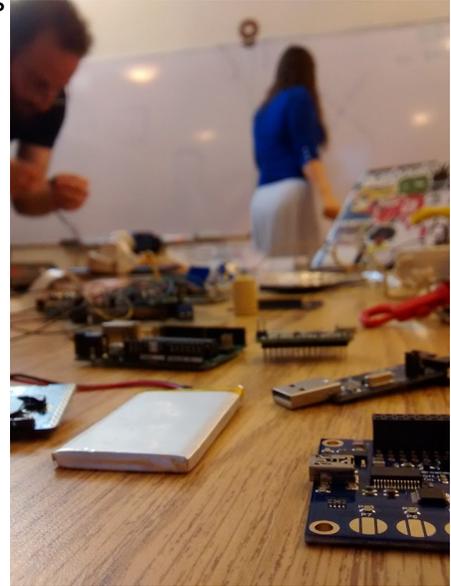
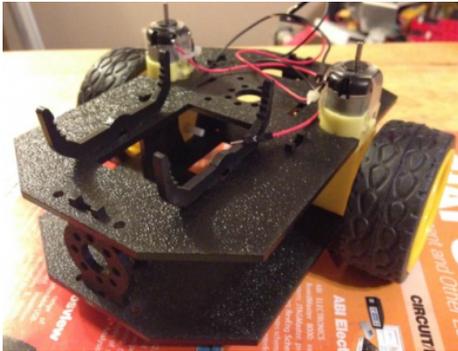
3D Thursdays and Open House continues to be the most popular event for new guests. The LulzBot Mini is the popular favorite 3D printer but the new exhaust fitting for the classroom laser cutter is being designed with ImplicCAD and printed on the Lulzbot Taz.



Project CRISPR successfully trouble-shot the first iteration of the gene-editing protocol. The transformation mix, Cas9 protein, transRNA, crRNA and Template DNA have all been absolved from killing the bacteria; it seems the efficiency of the gene change is simply very low or not enough bacteria were harvested to begin with to account for the high mortality (left plate). We're currently acquiring equipment to make the process reproducible and enable more people to participate. An upcoming CRISPR workshop is in the works and will be a half-day Saturday event. (and don't worry, it's rather harmless e.coli and we wipe surfaces down with bleach anyway)



Microcontroller Mondays continues to attract guests and members alike, either to share and discuss their own projects, to work on the classroom laser cutter's microcontroller brain, or to play with Arduino-powered toys like this rover (soon to be Bluetooth-controlled thanks to Uli).



PC ReBuilds has now moved to Sunday afternoons; bring your nearly-working computer or your Linux questions for Tom, or just come by and watch some poor PC being upgraded or just torn apart (and then carefully reassembled, maybe).



Intro Linux covered Linux installation, file system, package managers, command line navigation, firewalls and compiling software from source. The first run is complete and Xavier will now start from the beginning in late October or early November. If you missed the first few classes or still have questions left over, or if you want to help out with Intro Linux, get in touch! We may also restart a concurrent Intro CTF class for those interested in more in-depth command-line stuff.

Next Members' Meeting is October 11

The agenda includes one new bylaws amendment proposal. There is also an old bylaws amendment pending signatures (currently near 50% of 75% needed).

http://wiki.hacdc.org/index.php/Regular_Member_Meeting_2016_10_11

Other Stuff:

- The Combined Federal Campaign (CFC) season is starting. If you work with or near a Federal agency, find out if they can invite HacDC (#32991) to CFC informational events and contact treasurer@hacdc.org
- We've received a \$450 sponsorship check from Accelebrate. It'll go a nice way towards funding HacDC's ongoing projects next month.
- Several more HacDC members have expressed interest and have been invited to the Nation of Makers discussion channels on Slack, making about five. Nation of Makers is the group of national makerspace representatives invited to a meeting at the White House last month. Currently several areas of common interest to makerspaces are being researched: tools for automating member billing and financial reports (CRM), insurance concerns and funding for next year's NoM conference independent of OSTP's funding.
- HacDC continues to support High School Technology Services by providing that non-profit access to our classroom free of charge Monday thru Friday 9am-5pm. HSTS is putting together an offering of IT training classes for High School seniors this Fall.

Relevant Links:

www.hacdc.org

www.w3hac.org

LulzBot Mini Wiki

<http://wiki.hacdc.org/index.php/Category:LulzBotMini>

Project CRISPR worklog

http://wiki.hacdc.org/index.php/DC_CRISPR_Initiative_at_HacDC

SEM Wiki

<http://wiki.hacdc.org/index.php/Category:Stereoscan>

Spaceblimp 6 Wiki

http://wiki.hacdc.org/index.php/HacDC_Spaceblimp_6