

Engineers' News

March 2018

Vol. LXXX No. 7

www.FortWayneEngineersClub.org



Find us on 

March Tour



[The Summit](#)

[1025 W. Rudisill Blvd. Fort Wayne, IN 46807](#)

Thursday, March 22nd at 6:00 PM

FWEC Board Member Marna Renteria has arranged our March tour of [The Summit](#).

Release (12/22/2017) from [The Summit](#):

There may be snow in the forecast, but one Fort Wayne neighborhood just got a little greener.

An array of solar panels now graces the roofline of The Summit Athletic Center on West Rudisill Boulevard. One of the city's largest solar installations, the 100-kilowatt unit produces enough electricity to power 10 homes.

"At The Summit, we want to offer great space at a fair price to community-building organizations," said Melissa Dessaigne, executive director, in a prepared release. "Energy and water account for more than 17 percent of our expenses, and energy prices are outpacing inflation, so this investment in renewable energy is an important step toward keeping our space affordable. We're trying to build the best space for the best organizations in a way that is economically, socially, and environmentally sustainable."

The Summit Athletic Center is home to AWP Sports and Parkview Sports Medicine. The building's new solar array is expected to generate approximately 132,000 kilowatt-hours of power each year. That's enough to offset the building's entire energy bill, depending on weather and facility use.

"It's like saving 116 acres of forest," explained Spencer Mize, director of strategic initiatives, in a prepared release. "Each year, the renewable energy from this solar array will offset the equivalent greenhouse-gas emissions of burning 107,407 pounds of coal or 11,047 gallons of gasoline. The idea that we can save money while being good stewards of the environment is what fueled our desire to make this investment a reality."

Sustainable energy is right in line with The Summit's focus on innovation. Five years ago, The Summit debuted a modern collaborative classroom to foster twenty-first-century learning. In 2015, campus opened CookSpring, one of the region's first shared commercial kitchens for culinary entrepreneurs.

"Now in 2018, we're testing the idea that even urban campuses can harness energy produced by the sun," Mize said. "If the project proves successful, there may be additional sustainable energy initiatives in The Summit's future."

The Summit is a shared campus of socially-minded organizations and entrepreneurs working together to create thriving community. Partner organizations work to achieve social impact in the areas of education, economic development, social sustainability, health & wellness, and spiritual vitality. In addition, The Summit offers top-quality space for meetings, conferences, and retreats.

April Tour



[Thunderbirds/ Formula Boats](#)
[2200 West Monroe Street Decatur, IN 46733](#)
Thursday April 26th at 1:15 PM

FWEC Board Member David Gordon has arranged our April tour of [Thunderbirds/ Formula Boats](#).

Formula is a brand of pleasure boats produced in the United States and sold around the world. Formula is owned and operated by Thunderbird Products. Formula is based in Decatur, Indiana and currently manufactures 22 models. These power pleasure boat models include bowriders from 24 to 35 feet, cruisers from 24 to 40 feet, Go-fast boats from 29 to 38 feet, and a 45-foot yacht.

FY18 Membership Year FWEC Board

President: [Bharat Rajghatta](#) (260) 615-1869

Vice President: [John Magsam](#) (260) 482-2843

Treasurer: [Ryan Stark](#) (260) 456-0809

Secretary: [Elizabeth Garr](#) (260) 486-0158

1st Year Board Members:

[Dave Gordon](#) (260) 693-2167

[Ryan Stark](#) (260) 456-0809

2nd Year Board Members:

[Rod Vargo](#) (260) 416-0986

[Craig Welch](#) (260) 241-5138

3rd Year Board Members:

[Marna Renteria](#) (260) 744-3407

[Ellsworth Smith](#) (260) 637-6070

Resident Agent: [Ryan Stark](#) (260) 456-0809

Membership & Contact Committee Chair: [Dave Schaller](#) (260) 486-7610

Northeast Indiana DiscoverE Committee Chair: [Rob Cisz](#) (260) 435-0409

Board positions are crucial to the planning of tours and events for the FWEC. Please consult the [FWEC constitution](#) or contact us at info@fortwayneengineersclub.org for information on specific duties on board positions.

Northeast Indiana DiscoverE Engineers Week Banquet

Citizen Engineer Presentation



The Northeast Indiana DiscoverE Engineers Week banquet was held on Saturday, February 24th, 2018. Daniel E. Delaney (above) was presented with the Citizen Engineer Award. Dan was regrettably out of town that evening but submitted a pre-recorded acceptance speech which was played at the banquet, and his parents Jim and Nan Delaney were present and his father Jim accepted the award on Dan's behalf.

The Northeast Indiana DiscoverE Engineers Week Committee is proud to accept the nomination of Daniel E. Delaney and to declare him the 2018 Citizen Engineer. His qualifications and background are as follows:

Dan received his BS in Mechanical Engineering Technology from Purdue University in 1997. Dan began his engineering career in Huntington, IN at Shuttleworth Inc. as an Application Engineer and then joined General Electric in Fort Wayne in 1999 where he entered the electric motor industry. In 2010 Dan joined Regal Beloit where he is currently employed as the Regulatory Engineering Manager. During his motor industry career, he has supported several electric motor product lines including AC and DC Commercial, Industrial, HVAC and Appliance Motors. Some of his motor industry highlights include the development of the first integrated motor and controls for the appliance and HVAC industry, negotiating motor regulations with the US Department of Energy and development of the first global motor energy efficiency conformity assessment program. Dan is a member in several engineering societies and associations including Fort Wayne Engineer's Club, Institute of Electrical and Electronic Engineers (IEEE), Canadian Standards Association (CSA), International Electrotechnical Commission (IEC) technical committee, IEC EE convener, National Electrical Manufacturers Association (NEMA) Section Chairman, and Underwriters Laboratory (UL) Standards committee. Dan has authored several motor industry related magazine articles, technical papers and technical conference presentations.

Dan became a member of the Fort Wayne Engineer's Club in 1999 serving multiple terms as secretary, vice president, president and director positions. Dan is an active volunteer in his community: Junior Achievement classroom teacher (1999 to present), United Way Campaign, Science Central Board member (2002-2010) and Exhibits & Facilities Committee Chairman and member (2008-present). Dan is a dedicated coach for middle school Cross Country, Wrestling, and Track (2011-present). Dan is a lifelong active parishioner at St. Jude Catholic Church serving on multiple committees (Science Fair committee member, Pastoral Council member, Building and Facilities committee member, etc.). Dan enjoys staying active running with his children and participating in the community organized races, spending time with family at the lake, working on projects at home and lake cottage and taking trips with his wife Amy and their family. Dan and Amy have been married 19 years and have five children: Emmett, Aileen, Brigit, Collum, and Finian.

It is our distinct honor to recognize Daniel E. Delaney as the Northeast Indiana 2018 Citizen Engineer.

Northeast Indiana DiscoverE

Engineers Week Featured Speaker

"Additive Manufacturing, Done Professionally"
David J. Hockemeyer

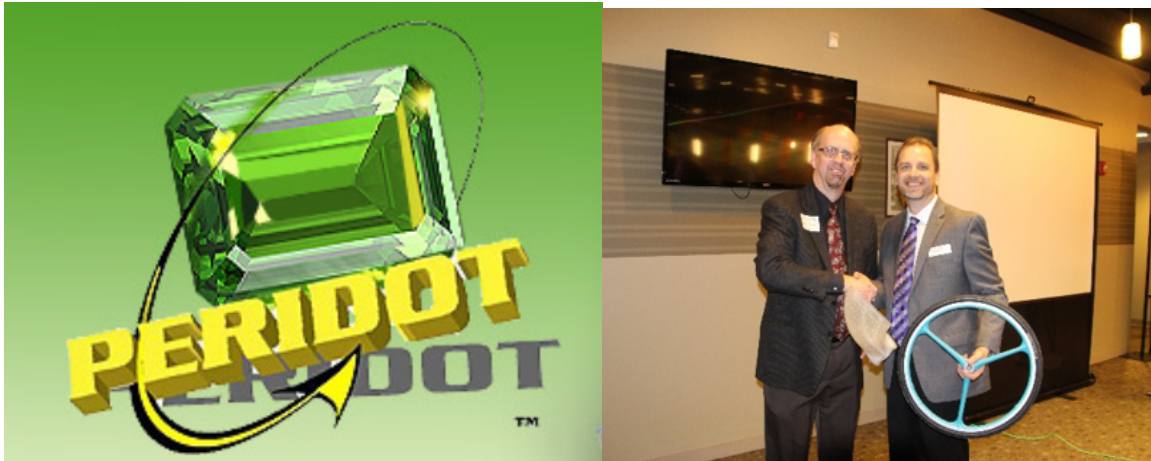


Photo: Dave Schaller (left) Dave Hockemeyer (right)

Some may remember nearly one year ago, back on March 30th, 2017, the Fort Wayne Engineers Club was privileged to a site tour of PERIDOT, Inc. in Hoagland, Indiana.

That privilege continued Saturday evening, as David J. Hockemeyer, President of PERIDOT Inc. was the featured speaker at the DiscoverE Banquet. David's fascinating discussion expanded beyond the information of the site tour, discussing how his company works with customers and suppliers from around the world in many diverse industries to provide Additive Manufacturing, 3D Printing, molding, machining, with a touch art and creativity, to meet the multitude of industry needs.

Northeast Indiana DiscoverE

Academic Awards

Northeast Indiana DiscoverE in conjunction with the below donors were able to award \$1,000 Academic Awards to local engineering students.

2018 Academic Award Recipients, Schools, and Donors:

- David Fox, Purdue, Aeronautical Engineering, BAE Systems
- Jared Badgley, Purdue, Biomedical Engineering, Fort Wayne Engineers Club
- Elizabeth Manes, Purdue, Biomedical Engineering, John Stump Memorial Award

- Jason Brown, Indiana Tech, Mechanical Engineering, Steel Dynamics Inc.
 - Riley Delaney, Purdue, Mechanical Engineering, BAE Systems
 - Jason Brand, Trine, Mechanical Engineering, Association for Facilities Engineering (AFE)
 - Benjamin Walters, Purdue, Biomedical Engineering, Oscar & Ophelia Weitzman Memorial Award
 - Ian Kissel, Trine, Mechanical Engineering BAE Systems
-

Northeast Indiana DiscoverE

The Northeast Indiana DiscoverE Chairman would like personally to thank all those who made the 2018 Engineers Banquet a success including all the generous Donors, Sponsors, and various Associates; The Engineering Society Presidents; Past Citizen Engineers of the Year; the Keynote Speaker, all those who served on the Engineers Week Committee past and present, and the Fort Wayne Engineers Club's Board Officers for their continued support.

Find the FWEC Easier!



The FWEC has invested in a "feather" sign to alert members where our tour entrance is. Look for the sign at future tours.

FWEC Treasurer Needed

Dear Fort Wayne Engineers' Club members:

As of December 2017, our club treasurer Jon Cook resigned. I would personally like to thank Jon for the work he did and wish him luck on the new business he started. As a fellow small business owner, I know how much time and effort that type of endeavor can take. So, starting in January I have resumed my old position as treasurer. If you still owe dues, please send them to the address below. I would also like to let club members know that we are currently looking for a new treasurer for the 2018-2019 club year. I have listed the treasurer duties below. If you have an interest, please contact me. If the treasurer's job isn't your cup of tea, perhaps you'd like to get involved in the club as a board member or vice president. The club exists thanks to volunteers, and new people and ideas are always welcome.

Summaries of duties for the Fort Wayne Engineers' Club Treasurer

- 1: Balance the checking/savings account.
- 2: Prepare a monthly treasurer's report for the officers meeting (1st Tuesday of every month from September to May)
- 3: Prepare a budget draft for discussion at the October board meeting.
- 4: Deposit checks, keep track of petty cash and record/deposit money from PayPal as it comes in.
- 5: Print out new member applications and issue new membership certificates.
- 6: Keep the names, addresses, phone numbers and e-mails up to date for all club members.
- 7: Send out invoices for newsletter adds.
- 8: Send out past dues notices to delinquent club members, first via e-mail, then hard copies.
- 9: Remove delinquent club members from the roster.

The time it takes to perform these duties varies quite a bit from month to month. On average, I estimate I spend about 2 hours per month.

Sincerely,

[Ryan Stark](#)

Fort Wayne Engineers' Club Treasurer

828 W Oakdale Drive

Fort Wayne, IN 46807

260-456-0809

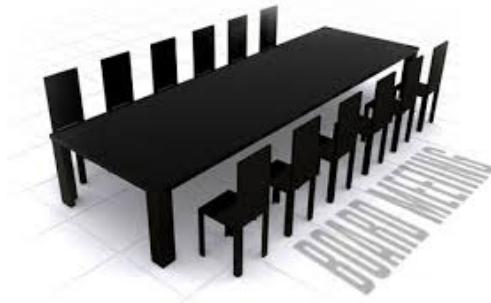
info@fortwayneengineersclub.org.

New FWEC Members



Welcome Full Member Gavin Neyman, Albert H Bostain

FWEC Board Meetings



Fort Wayne Engineers' Club board meetings are open to all FWEC members. The next FWEC board meeting will be Tuesday April 4th at 7:00 PM. Board meetings are held on the [Indiana Tech campus in the Academic Center](#) in room ACC-201.

FWEC Membership



The FWEC exists through funding of its membership. Please forward your copy of the Engineers' News to prospective members and encourage their attendance at tours. Remember, the FWEC is the best deal in town, annual membership is \$10. We offer free monthly tours September through May. Please be sure to recommend FWEC membership to your colleagues and friends.

Advertise in the Engineers' News

The FWEC provides advertising space within the Engineers' News. Advertisements are \$10 per issue and limited to ½ page of content. For submissions please contact info@fortwayneengineersclub.org.

February Tour



[Tekknowlogic](#)

[6809 Elzey St, Fort Wayne, IN 46809](#)

Thursday February 15th at 6:00 PM

Eleven members attended our February 15 tour at Tekknowlogic of NE Indiana, LLC. Attendance was down because sustained heavy rain made for dank, dark, and dangerous driving.

Tekknowlogic is a startup in its seventh month with three individuals pooling at least a decade each of individual skills. They provide essentially cradle to grave electronic services on a foundation of constantly upgraded environmental and cost awareness. This startup is essentially a consolidation of what they had been doing as individuals and as employees of other businesses, providing for business-office, industrial, government, and school needs. As the tour progressed, they seemed to have enjoyed both routine and one-off specialty tasks with old or new equipment.

They welcome most electronics for recycling and repurposing, free of charge, except tube TVs and CRTs. Phone ahead (918-3222). The location is 6809 Elzey Street, immediately south of Lower Huntington Road between Bluffton Road and Ardmore Avenue.

Most of our tour and discussion focused on their recycling research and deployments. They repeatedly indicated that the State of Indiana and the City of Fort Wayne are frequently in touch with them as the only truly de novo recycling-reusing-repurposing for-profit effort in Indiana (and potentially beyond) in the past decade.

For years, they have provided a range of services to eliminate info on hard drives and other memory systems, tailored to the preferences and concerns of clients. A certified service should soon be available, which surprised us regarding the amount of detail, chain of possession documentation, ISO considerations, and other concerns. Absolutely eliminating

information in memories can be accomplished by a range of methods including properly-performed software engineering, various types of true erasing (potentially using substantial electrical power), or physically turning the memory into grit. Hammering a screwdriver through actual memory components is often easier said than done, and would not prevent reading them in most cases.

Traditional methods of recovering valuable metals often result in huge waste streams of intermixed (often ground up) plastics and non-recovered metals going into landfills. There are also considerable water, solvent, air, and carbon-footprint concerns. Some methods are outdated because the amount of valuable metal in electronics has precipitously declined over the years. Other countries increasingly do not allow gross importation or processing of old electronics, because of the environmental and health consequences that have resulted. Importation of old computers to "mine" them for personal information has moved mainly to Eastern Europe, but the value of such info has dwindled. Info left on phones is preferred.

Tekknowlogic sounded as if it were part of a literally global "new economy" in which entrepreneurs share ideas, info, and support. A large number of recycling and repurposing businesses are underway because of the Paris Accords and, in the U.S., accumulating State regulations against landfill disposal of electronics. Tekknowlogic is explicitly trying to avoid competition with businesses already managing specific materials in environmentally sound ways. In those cases, it provides other businesses with isolated components such as the actual discs in computer hard drives (aluminum discs coated with palladium and titanium), the motors in computer hard drives (complexes of multiple metals), or intact ink cartridges (to sell as is, or refill for reuse).

Ink cartridges have been so expensive that many entities scrap printers when the ink needs replacing. The recycling floor had about 5 cubic yards of discarded printers stacked up. Tekknowlogic suspects this trend will soon wane, but no reason was given. (Cartridge World tells me that radically less ink is being included with most new printers, forcing people to get accustomed to purchasing cartridges.)

A secondary driver of printer waste streams is that the glass of the platform (platen) is fragile and often breaks apart. Tekknowlogic has considered trying to be a local source of used replacement platens. It is also not unusual to receive supplies of unopened new ink cartridges along with these printers.

They manually dismantle waste electronics into components amenable to individual processing. For every cubic foot of components containing some valuable metals, they accumulate about 72 cubic feet of ABS plastic scrap weighing about 1 short ton.

Those components still need to be processed to separate the metals, typically by further manual separation and then melting different metals out using progressive steps of carefully controlled temperatures and recovery. Lead was eliminated from solder so long ago that it is seldom a factor. Mercury is toxic waste in today's world and expensive to responsibly dispose of.

Tekknowlogic is awaiting delivery of two custom built machines. One should process ABS plastic into raw reusable ABS pellets. The other can convert circuit boards back into insulating fiber and matrix ingredients. Steel components such as computer cases are usable scrap metal as is.

Flat screen displays are refurbished, repurposed, and/or recycled by various businesses.

Except for one nascent startup in Europe, no acceptable process exists for dealing with tube-type displays (TVs and CRTs). Current practice in much of the developed world is to store them, often in worn-out semi-trailers, amounting to a mind-boggling number of CRTs and storage expenses which increase daily. Tekknowlogic is researching their own process, in open dialogue with the European firm, and well along in obtaining the necessary regulatory permits. CRTs contained reduced or minimal lead by the end of 1998, but contain many other regulated materials. How to reutilize old glass, regardless of source or prior use, can be a conundrum.

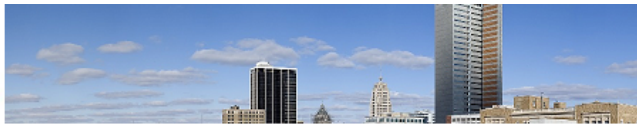
Very old phones are disassembled into various components. Somewhat newer phones may be moved on to various agencies for limited reuse, especially 911 applications.

Electronics can sometimes be sold by word of mouth or on eBay for reuse or as collectibles. This takes an experienced eye and is not as common or lucrative as most people imagine.

A dream project is creating a mini-home for use by local agencies in certain homeless situations, using almost entirely recycled materials. Cost cannot exceed the \$20,000 currently budgeted/person/year by agencies for housing. The unit is sufficiently small and efficient to use solar cells and other features to potentially avoid typical utilities, except for water and sewer. The primary remaining challenge is how to attract sufficient glazing for a greenhouse-like space, key for various therapeutic and functional reasons.

Another useful aspect of this tour was an inside view of a startup business. A key component of their business plan is avoiding debt. Years of effort and cautious steps preceded taking on a physical commercial location. Capital investments are prioritized and purchased as allowed by reinvestment of "profits". Proper interactions with local and state regulators, and regulations, were evident. Relations between neighbors in a mixed commercial and residential area were discussed. Security and regulatory Codes (such as signage, zoning, and building standards) were compared when inside versus outside city boundaries. Overall, being within Fort Wayne was sufficiently beneficial to justify the extra labor and expense.

This was an invigorating evening of discussion and exploration. Our sincere thanks to Tekknowlogic. Please consider them for IT purposes. They would appreciate your used electronics, except tube TVs and CRTs.



March 28, 2018, Dinner Event- Breaking Bad Scrum by Ryan Ripley



Abstract:

There is too much bad Scrum in the world. Teams are struggling to deliver valuable software that delights their customers because they are falling into common Scrum anti-patterns. Using real examples and stories, I'll explore these anti-patterns and discuss how to use the Scrum Values and Agile Manifesto to think differently and design experiments to correct the bad scrum.

Attendees will walk away with a new approach to breaking their bad scrum habits. They will also have ideas provided to them about the most common anti-patterns that they can try out when they get back to the office. Questions are always welcome and attendees with pressing issues can also have the opportunity to explore their situation and receive help from the entire group.

BIO:

A Professional Scrum Trainer with Scrum.org, Ryan Ripley has experience as a software developer, manager, director, and ScrumMaster at various Fortune 500 companies in the medical device, wholesale, and financial services industries. Ryan is committed to helping teams break the cycle of "bad Scrum" so they can deliver valuable software that delights their customers. The host of Agile for Humans, the top Agile podcast on iTunes, Ryan lives in Indiana with his wife Kristin and three children. He blogs at ryanripley.com and is on Twitter @ryanripley. Ryan loves talking about all things Agile and promises not to speak in the third person if you come up and ask him a question.

Date: Wednesday, March 28, 2018. RSVP by Sunday, March 25, 2018
Location: Don Hall's GuestHouse, 1313 W Washington Center Rd, Fort Wayne, IN 46825

5:30 PM – Networking/Social

6:00 PM – Dinner

6:45 PM – Announcements

7:00 PM – Presentation

8:00 PM - Adjourn

- NEIC chapter members: dinner and speaker - \$20
- In Jobs-Transition or Student Membership - \$10
- Non-members: Dinner and speaker - \$30
- Speaker Only: \$0 (Members), \$10 (Non-Members)
- Pay now with credit card only; pay at door option is no longer available

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