



KITSAP Robotics & Electronics Enthusiast Group (KREEG)

KREEG Newsletter 12-07

Attendees		
Doyle Maleche	Emily Oliphant	Ben Milovich
Carl Bruce	Emelia Cambra	Ian Cambra
Mike Cambra	Wendy Cambra	Jerry Holaway
Rich Peel	Braxton Brown	Charlie Johnson
Karl Kirchhofer	Todd Hansen	Dennis Wendt

Hello again KREEG members!

We had another KREEG meeting on 25 July at my (Doyle) house with an impressive 15 attendees!

Each member conveyed their skills, hobby, interests, and what they would like to gain from KREEG. Great introductions by all.

Braxton Brown gave a brief and demonstrated how he modified and converted a large AirSoft™ Tank into a remote vehicle. His extended goals are to integrate collision avoidance, wall following, and voice control.

Charlie Johnson brought and distributed printed specifications and capabilities for the Arduino microcontroller. THANKS CHARLIE!

Mike Cambra brought his Arduino UNO that he purchased from eBay for \$15 – GREAT DEAL! He also demonstrated an engine efficiency module kit that he built and installed in his 280Z, showing us his “pimped out ride” – AWESOME!

We wish to officially thank Carl Bruce for donating LOTS of stepper motors, servo motors, pneumatic actuators and controllers to KREEG. These items are available FREE to use in any project as long as you present your design plan and justification to the group. Because most of the materials are costly, this ‘donation’ program will be managed similar to applying for a college or monetary grant – tell us about your project and commitment. However, as KREEG is a non-profit organization, we will accept a donation for certain parts/materials. This money donation will be recorded in our budget records and used to grow our mission and provide funds for maintaining our website and rent budget if we use a different facility for our meetings.

Doyle showed various Arduino modules and a robotic control setup using a Wii controller and the Arduino. The discussion regarding Arduino programming and interfacing was the topic for this meeting. Doyle will

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Time: 6:30pm – 8:00pm

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also offer FREE Arduino programming lessons in the evenings, and project building/tutoring on weekends. Please schedule in advance as there might be opportunities to have multiple individuals schedule for the same evening.

Additional interest in basic electronics was also discussed and a few individuals volunteered to assist in tutoring.

As mentioned, our vision is to have monthly meetings for introductions and discuss new technologies. Additional gatherings outside of the KREEG meetings will include tutoring in programming (microcontrollers, PC, Smartphones, etc.), building robots, assisting in personal projects, and a KREEG pot-luck picnic this summer. More to follow...

We sold the donated new Xcelite tool kit that was offered at the meeting. This money will go toward the purchase of our DNS account name "KREEG.org" and webpage work. Anyone interested in webpage/website design or has experience with web graphics; let Doyle know so we can move forward with the KREEG web site.

SUCCESS STORY:

The day after new member Karl Kirchofer attended his first meeting, he brought over 10 year old Nel Straub to show her the shop and discuss projects he is working and ideas for future projects which could involve members of KREEG. After our discussion, he showed me an expensive electronic counter-top ventilation system which recently failed. Initial observations revealed a resistor with severe burn marks. A quick measurement with the multimeter proved that the resistor had an OPEN indication (resistors NEVER SHORT, they may degrade or OPEN). Karl and Nel rummaged through my box of electronic parts and discovered an exact replacement; 10 ohm 3WATT resistor. I unsoldered the bad component and Nel soldered in the replacement like a pro! We powered the unit and it functioned properly with correct indications. Karl said that the appliance repair technicians gave excuses and said it will be awhile before they will be able to look at the unit. This repair is a great example of how KREEG resources can help in troubleshooting and potential repair of electronic items, and gain experience and cost savings.

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Some interesting and resourceful (but not all inclusive) websites that you can visit:

www.sparkfun.com	Great electronic hobby store! Watch the 'Friday posts'
www.allelectronics.com	Mail-order warehouse of parts
www.roborealm.com	Computer Vision using cameras, Kinect, motor control, robot vision
www.adafruit.com	Another Arduino and electronic store for 'geeks'
www.arduino.cc	Original website for EVERYTHING Arduino!
www.processing.org	Great interface software for graphic programming and interfacing
www.fritzing.org	Virtual Arduino and breadboard software!
http://www.youtube.com/watch?v=fCxzA9_kg6s&feature=list_other&playnext=1&list=SPA567CE235D39FA84	Best Arduino tutorials on YouTube. Author: "SCIGUY14"
www.geeks.com	<the name says it all...>
http://blog.makezine.com/arduino	Makers web site with Arduino specific topics
http://www.parallax.com	Basic Stamp, Controllers, Propeller MCU, gadgets
http://www.servocity.com	Servos, GREAT Pan/Tilt platforms
http://www.jameco.com/Jameco/robot/robotstore.html	All things robotics **Pricey though
http://www.dimensionengineering.com	BEST motor controllers for the price! Very powerful and versatile. Adaptable to many control and communications protocol; Wireless, Serial, Radio Control (RC), Joystick (potentiometer)
http://www.basicmicro.com/	Home of the BasicATOM microcontroller and 'ROBOCLAW' motor controller (similar to DimensionEngineering Sabertooth)
http://www.pololu.com	One of my favorite! Motor and Servo controllers, microprocessors, kits, and more!!!

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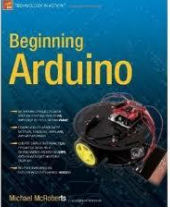
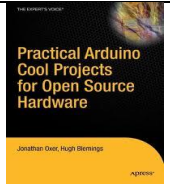
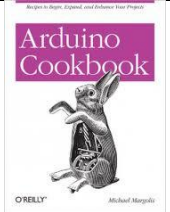
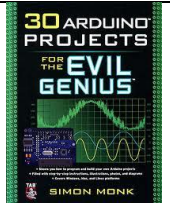
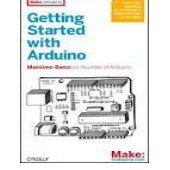
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Some really great Arduino books I have in my library you may borrow:

	Beginning Arduino	Intermediate level reading and experiments
	Practical Arduino Cool Projects for Open Source Hardware	(whew! Long title) Intermediate to advanced. More towards the Open Source hardware side.
	Arduino Cookbook	**This is a must have for all Arduino fans. Great reference! Each chapter is arranged like a recipe (cookbook). Before starting it lists the ingredients/items you will need to complete the session.
	30 Arduino Projects for the "Evil Genius"	Fun projects for all levels. Great intro to electronics.
	Getting Started with Arduino	**A must-have for all beginners! Search Amazon.com and you may find this book for free or as much as \$2.00

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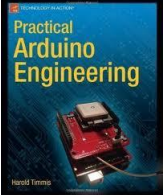
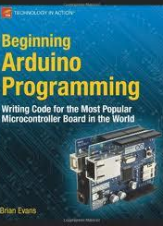

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	<p>Practical Arduino</p>	<p>A great reference for Intermediate readers. Explains the processor in detail.</p>
	<p>Making Things Talk (second edition)</p>	<p>This book introduced me to Arduino. Great interfacing projects and ideas to make your project talk!</p>
	<p>Practical Arduino Engineering</p>	<p>I reviewed this book at Barns and Nobles. ** Nothing to do with engineering ** Weak topics. Lacks closure. **Too expensive! (\$50) – save your money</p>
	<p>Beginning Arduino Programming</p>	<p>Follows after the “Getting Started with Arduino” and “Beginning Arduino” books. Still a great reference for intermediate and advance readers.</p>
	<p>Arduino Internals</p>	<p>This should be the second edition to “Practical Arduino”. Goes more in depth how the AtMega processor works. Includes some great projects for intermediate and advanced readers. A great companion to “Practical Arduino”</p>

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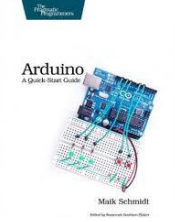
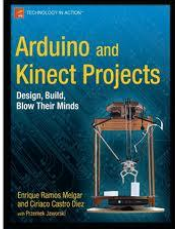
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	<p align="center">Arduino: A Quick Start Guide</p>	<p align="center">**Second best book!</p> <p>A must have for all readers! Fun projects! This gives great insight and ideas for your robot and interfacing projects</p>
	<p align="center">Arduino Kinect Projects</p>	<p>More for the advanced projects incorporating computer/robot vision using the Kinect Tracking module</p>

Next month I will layout various robot books to consider. Let not forget the Parallax 'Basic Stamp' and Propeller microcontroller, and Microchip's line of microcontrollers and interface chips. We will expand our options to these and others in the coming months.

The KREEG meeting announcements will always appear in the footer of this newsletter. The next meeting is scheduled for Friday, 24 August 2012, 6:30pm to 8:00pm.

In closing, please let me know if I need to make corrections for misspelled names and I will fix them.

Until next time...

Best,

Doyle Maleche

Maleche1@comcast.net

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