

Malvern Inventors Club

Malvern Inventors Club Newsletter - July 2007

Next Meeting Date: 9th August 2007 @ The Heeks House - 7:00pm

Novel Energy Conversion Devices:

Heat Powered Generators:

Heat into Electricity: The SCORE (Stove for Cooking, Refrigeration and Electricity) Project is being developed by researchers worldwide in a £2 million venture. The basis of the device uses the thermoacoustic effect in an acoustic Stirling heat Engine (<http://www.lanl.gov/mst/engine/>) which is found in applications like combustion-fired natural gas liquefaction and radioisotope-fuelled electric power generation. It relies on the non-uniform heating of a gas which can give rise to the generation of sound waves – an example is the ‘singing pipe’ demonstration found in school physics lessons. SCORE is designed to provide refrigeration, electrical power and cooking facilities from burning wood. <http://www.electronicweekly.com/ARTICLES/2007/06/14/41599/Scientist+uses+sound+to+power+light+bulb.HTM>

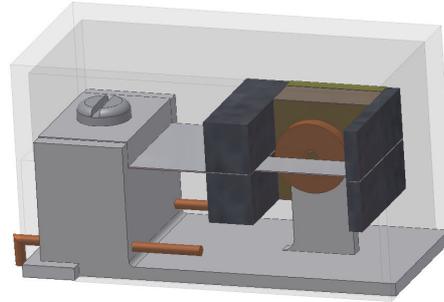


A similar device has been developed by Professor Orest Symko at the university of Utah (pictured)

<http://www.unews.utah.edu/p/?r=053007-1>.

Vibration Powered Generators:

A 50 μ W ac generator smaller than a sugar cube has been developed at Southampton University. It comprises high power magnets on a stainless steel cantilever and a fixed coil. The resonant frequency is adjustable from 47 to 55 Hz which suits vibrations from air conditioning units and air compressors. The generator was developed as part of the €4.13m



VIBES (Vibration Energy Scavenging) project <http://www.vibes.ecs.soton.ac.uk/>.

Meanwhile researchers in the Netherlands have used micromachining technology to make a device to generate electricity from mechanical vibrations using the piezoelectric effect. It is reported that with an input vibration frequency of 1.8 kHz and an amplitude of a 180 nm an output power of 40 μ W has been obtained http://www.imec.be/wwwinter/mediacenter/en/harvester_2007.shtml.

Win Money

A chance to win a bunch of money with the *Electronics Weekly Gadget Freak Competition* sponsored by RS - Build ingenious inventions and win £250! <http://www.electronicweekly.com/blogs/gadget-freak/>

Inventors Wanted For TV Filming On 8 August 2007

'I Didn't Know That' a tv series on North One TV (a National Geographic Channel which is screened in 165 countries) is looking for inventors for filming on 8th August in Birmingham They're looking for fully working mock-ups or prototypes which can be assembled or powered up quickly and seen working on camera – contact: Gurjap Singh on 0121 697 1939. <http://natgeochannel.co.uk/vc/idkt/>