Society for Promotion of Excellence in Electronics Discipline

Volume 2, Issue 2
January 2013

SPEED e- NEWSLETTER

INSIDE THIS ISSUE:

Main Article

The all pervasive Electronics Embedded Systems must go GREEN

The rapid development of electronics and software tools during the last four decades coupled with the increase in computational speeds and a reduction in the cost has resulted in rapid evolution of embedded systems. The development has touched every aspect of life, including the way people enjoy comfort living, communicate, receive entertainment, avail healthcare, conduct business, automation in industry and, of course, the automobiles. Some of the widely used products include, Automatic dispensers, Household appliances, IT and telecommunications equipment, Consumer equipment, Lighting equipment, Electrical and electronic tools, Toys, leisure and sports equipment, Medical devices, Monitoring and control instruments.

- One device, multiple functions
- Center of ubiquitous media network
- Smart mobile device: next drive for semicon. Industry

Continued on page 2…….

Forthcoming Events/Activities

National Conference on Recent Initiative towards Green Electronics (NCRIGE-13)

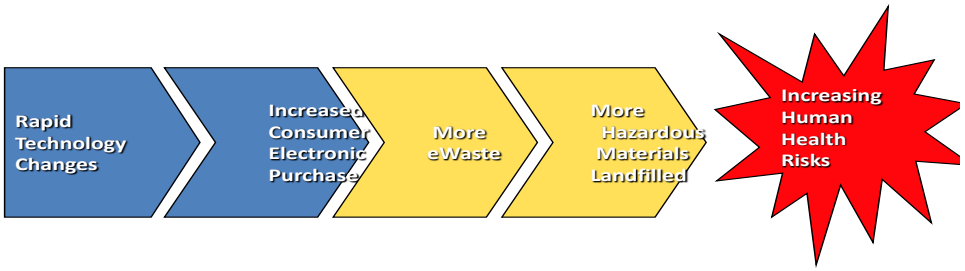
Date: 8-9 February 2013
Place: Post Graduate Department of Electronic Science
Brijlal Biyani Science College, Amaravati
Co organizer: SPEED, AUETA,
Sponsorers: UGC, DST & Amaravati University

The all pervasive Electronics Embedded Systems must go GREEN…

Thus the embedded systems have become all pervasive. With such developments of world's information industry from the beginning of the 21st century, our modern society is more than ever dependent on information. Whether it's political or economical development or an increasingly multi-media driven culture, public and private life is fed by enormous, ever-growing data volumes. These are some examples of new comfort and convenience related technologies that have become feasible in recent years.

Rapid technological change encourages consumers to abandon their old consumer electronics products and purchase the newest releases. This leaves a slew of discarded products and a lot of waste. Improper disposal of electronics products that contain toxic materials can cause harmful environmental impacts.

Why is eWaste a Problem?

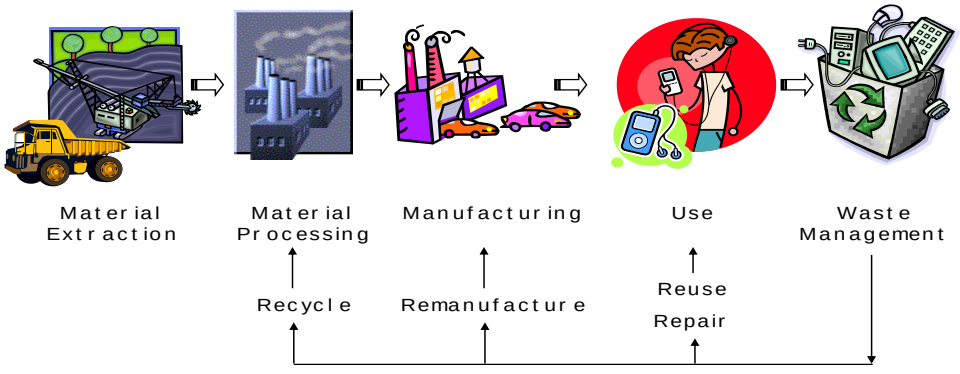


"We love those subjects which we understand and later work on it."

-N. M. Kulkarni

Reuse or recycling of electronics can lead to safe management of these hazardous materials when a product reaches the end of its useful life.

Product Lifecycle



Donating electronic items for reuse provides positive environmental and societal benefits. Reuse and refurbishing electronics provides environmental benefits by preventing waste, extending useful life and keeping products from entering the waste stream until a later time. Society benefits from donation because schools, nonprofit organizations, and lower-income families are able to reap the benefits of computers and other electronics that they otherwise could not afford.

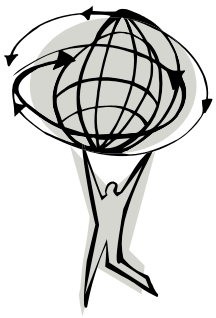
Waste reduction can also be achieved by purchasing greener products. Donating used electronics for reuse extends the lives of valuable products. Recycling electronics prevents valuable materials from going into the waste stream. Consumers now have many options to recycle or donate for reuse their used electronics. Many computer, TV, and cell phone manufacturers, as well as electronics retailers offer some kind of take back program or sponsor recycling events.

The time has come to design and develop the Green Electronics Products and efforts around world are being done to evolve such systems. Green Electronics and green computers are advanced product designs, technology and manufacturing processes that have less impact on the environment while providing better overall value for the consumer in areas of energy efficiency, cleaner materials and longer product life.

Green Electronics design and manufacturing processes are optimized to reduce energy consumption, use less natural resources, increase the use of reclaimed materials, reduce waste, and reduce or eliminate toxic substances like lead, mercury and brominated flame retardants which are harmful to the environment and human health. This makes their recycling more safe and environment friendly.

It is important to become aware to make an educated effort in the right direction. The National conference on Recent Initiatives towards Green Electronics organized by Brijlal Biyani Science College Amaravati is a timely step in this endeavor. I give my wishes for success of the conference.

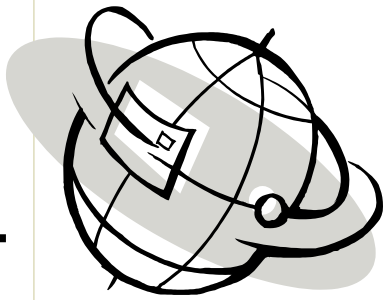
Dr. Arvind Shaligram, Technical Chair NCRIGE-13



"Let us work towards Excellence in Electronics for the betterment of society"
-N. M. Kulkarni

SPEED Memberships Details

Membership Type	Fees (Rs.)
1. Patron Members	10,000
2. Life Members	2,000
3. Ordinary members	500 (per year)
4. Student	200 (per year)



Editorial team of SPEED e-Newsletter

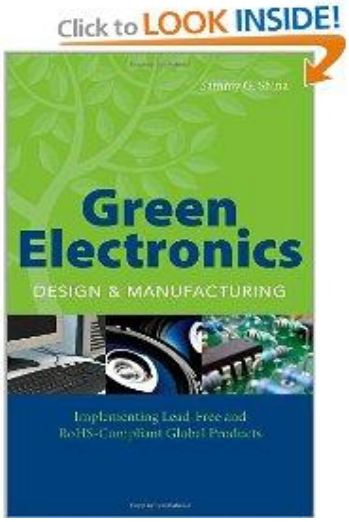
Dr. N. M. Kulkarni (Editor)	nmkulkarni123@yahoo.com	98500 72955
Prof. R. K. Nerkar	rknerkar@rediffmail.com	94235 81016
Dr. M. L. Dongare	mld47@rediffmail.com	98232 44245
Prof. D. B. Gaikwad	dbgaikwad@gmail.com	98815 09515
Prof. (Mrs.) Deepa Ramane	ramanedeepa@yahoo.co.in	99210 48350
Dr. N. D. Sali	snitind7@gmail.com	94237 50368

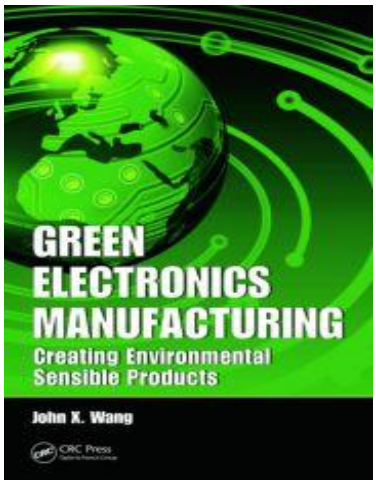
Readers' Guide

Editor

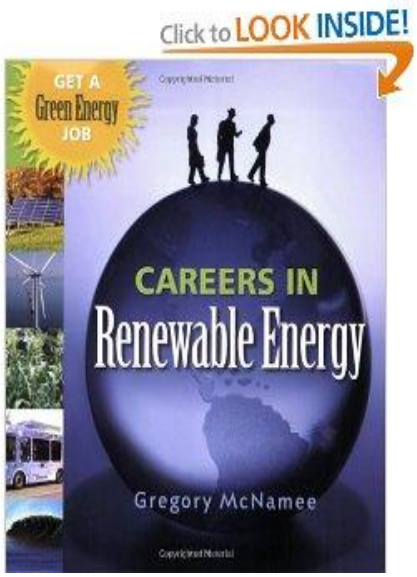
Dr. Nitin Kulkarni
Dept. of Electronic Science
Fergusson College,
Pune 411004

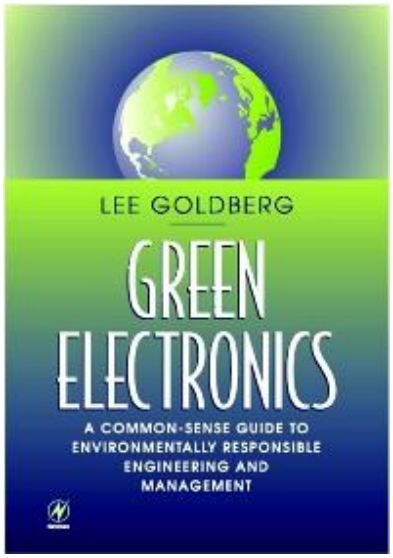
Phone 020 6686 6043
Mobile 92253 40987
E-mail
nmkulkarni123@yahoo.com





Get a Green Energy Job





Numerous job opportunities await in the fast-growing field of renewable energy. Grab these handy books & discover how green energy can be a part of your future. Job sectors include solar and wind energy, bio fuels, hydrogen energy and fuel cells, geothermal energy, hydro energy, green building, climate study, energy management and efficiency, and much more. Various jobs within each sector (engineering and technical positions, project management, R&D and sales/marketing) are discussed, and the appendix is loaded with resource materials for further education and training, professional associations, reference Web sites and more.

National Conference on Recent Initiatives towards Green Electronics

8 FEB 2013 9

(NCRIGE-2013)

Organized by

Post Graduate Department of Electronics,
Brijlal Biyani Science College,
Amravati (Maharashtra)-444605

Co-Organizers

- Society for Promotion of Excellence in Electronics Discipline (SPEED), Pune.
- Amravati University Electronics Teachers Association (AUETA), Amravati.

Sponsorers

- University Grants Commission (WRO), Pune
- Dept. of Science & Technology, Govt. of India.
- Sant Gadge Baba Amravati University, Amravati.

Technical Co-Sponsorers

- IEEE India SSCS & CAS Chapters
- Inditech Systems Ltd.,Pune.
- Vidarbha Advanced Development & Computer Technology Research Organization.

Websites:
www.biyanicollege.com, http://ncrige.tripod.com
Email: ncrige13@gmail.com
Mobile :09422857431,09423649141
Landline: (0721) 2677011, 2562086
Fax : (0721) 2562086

(NCRIGE-2013)

Publication of papers

Best of the conference papers may be recommended for Publication in the Journal of SPEED. All the papers will be published in conference proceedings having ISBN.

Mode of presentation

i) Poster: Papers selected for poster presentation will have to be presented through a poster of size 1meter x 1meter

ii) Oral : Paper selected for Oral presentation will have to be presented through PPT.

Awards

The Best paper awards in following three categories will be given for the papers judged to make the most significant contribution to the conference.

Category I : NCRIGE-2013 Post Graduate Student Award for Best Review / Research Paper on the theme of conference.

Category I I: NCRIGE-2013 Young Scientist Award for the best paper by Young Scientist.

Category III : NCRIGE-2013 Best Scientist Award for best paper by Senior Scientist.
(Detail Guidelines are available on www.biyanicollege.com & http://ncrige.tripod.com)

Registration

All the participants including contributory paper authors are required to register and pay the registration fee applicable as follows:

Category	Fee
Student	Rs. 500/-
Research Scholar	Rs. 1000/-
Academician	Rs. 1500/-
Industrialist	Rs. 2000/-

Mode of Payment

1. D.D. in favor of "Principal, Brijlal Biyani Science College" payable at Amravati.

2. Through RTGS

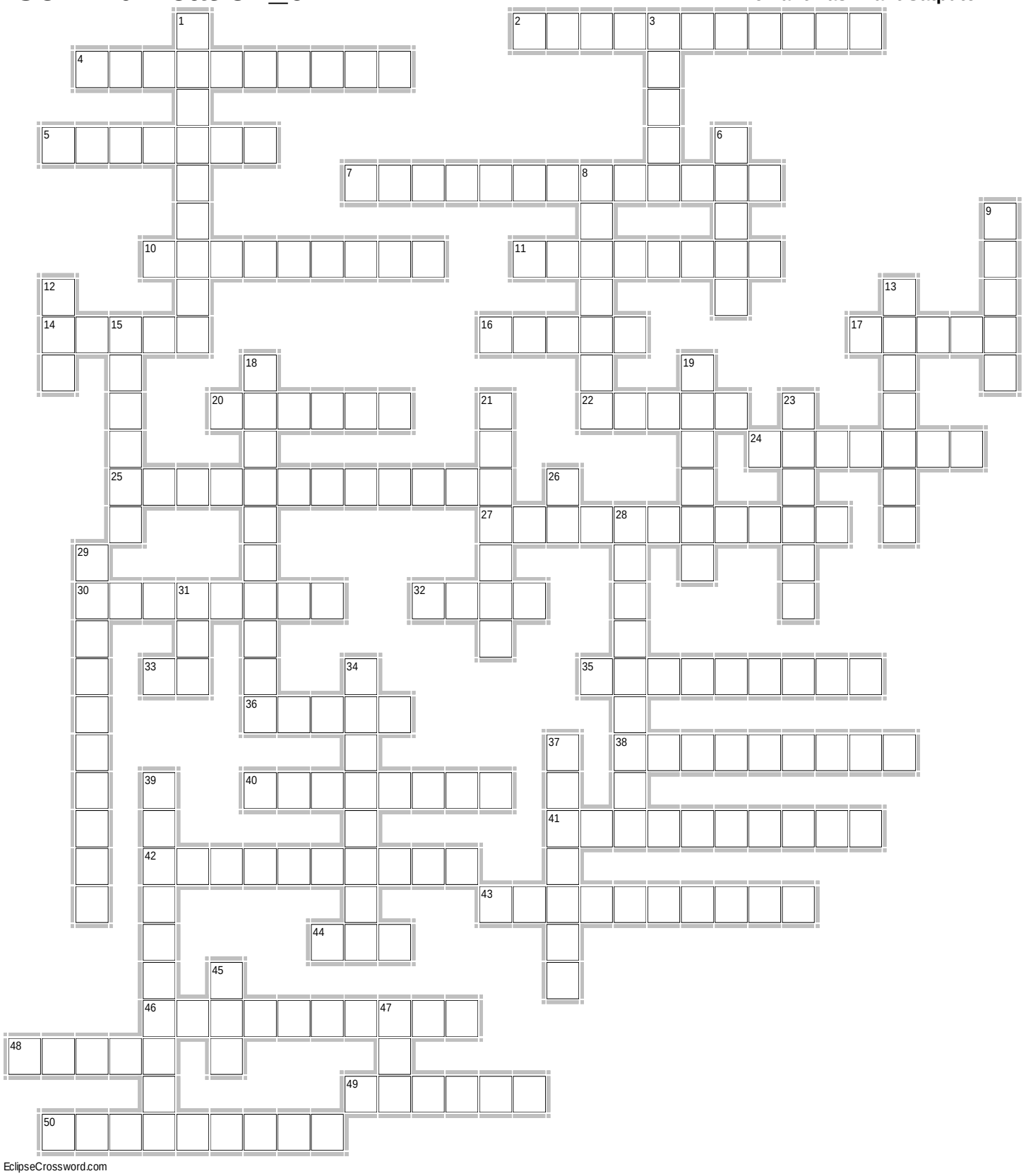
Bank Name	:	Bank of Maharashtra
Branch	:	Rajapeth, Amravati.
Branch Code	:	767
Current A/c No.	:	20106400499
MICR Code	:	444014767
IFSC Code	:	MAHB0000767

Contact:
Dr. D. S. Dhote, Professor & Conference General Chair,
Dept. of Electronics, Brijlal Biyani Science College, Amravati (Maharashtra) - 444605
Mobile No. 09422857431, e-Mail : dsdhote@rediffmail.com, ncrige13@gmail.com
Phone : 0721-2677011, 2562086, Fax : 0721-2562086

Student's corner: CROSS WORD PUZZLE

Communication_01

Hemant Yashwant Satpute



EclipseCrossword.com

Student's corner: CROSS WORD PUZZLE

Across

2. The ____ converts the message into a form compatible with the selected medium. (11)
4. A signal with a frequency of 18 MHz has a ____ of 16.67 meter. (10)
5. The radio communication hobby is called ____ or "HAM" radio. (7)
7. The 3 major types of ____ paths are wire, radio and fiber-optic cable. (13)
10. Electronic communication came into being in the late ____ century. (9)
11. Another name for radio. (8)
14. Two major barriers to _____ communication are distance and language. (5)
16. ____ signals are not transmitted by EM waves because)a) Antennas would be too long (b) Audio signals do not radiate (c)Simultaneous transmissions would interfere (d) The frequency is too low. (5)
17. Radio transmissions do not occur in the ULF/LF (5)
20. The signaling of individuals at remote locations is called ____. (6)
22. ____ waves are made up of electric and magnetic fields. (5)
24. The Human ____ range is approximately 20 to 20, 000 Hz. (7)
25. The process of transmitting two or more baseband signals simultaneously over a common medium is called ____. (12)
27. Communication is defined as the process of exchanging ____. (11)
30. A frequency of 1 GHz is the same as 1 ____ MHz (8)
32. Most human communication is _____ even though there is a glut of written communication. (4)
33. Signals that travel free space for long distances are called EM waves or ___ waves. (2)
35. Performing, recording & analyzing measurements at a distance is done with ____ equipment. (9)
36. Underwater RADAR is called ____ (Active). (5)
38. Radio is used in ____ system in following ways. Microwave relay, Satellites, Cordless phones & Cellular phones. (9)
40. The _____ converts the message from the medium into a form understandable by a human. (8)
41. To make the transmitted signal compatible with the medium, the process of ____ must be used. (10)
42. Frequencies above 1GHz are called ____. (10)
43. Simultaneous two-way communication is called ____. An example is telephone communication. (10)
44. Voice and video signals may be transmitted digitally if they are first passed through a(n) _____ . (3)
46. Two way communication where each party takes turns transmitting is referred to as _____. (10)
48. The frequency range of Human ____ is 300 to 3000 Hz. (5)
49. Voice and video signals are continuous ____ voltages. (6)
50. The SHF & EHF ranges are primarily used by RADAR & _____ communications. (9)

Down

1. Recovering the originally transmitted signal is called demodulation or _____. (9)
3. HF signals are also called ____ waves. (5)
6. Undesirable interference in communication is ____ which is added to the signal in the communication channel. (5)
8. In the process of modulation, the information signal is impressed upon a higher-frequency signal. This is known as _____ transmission. (7)
9. The ____ main elements of any communication system are transmitter, receiver and channel or medium. (5)
12. TV (Channels 2 to 13) & FM broadcasting is in the ____ part of the spectrum. (3)
13. The two types of SONAR are active and _____. (7)
15. Computers exchange digital data over telephone network by using devices called _____. (6)
18. Radio astronomy is based on the fact that stars and other heavenly bodies emit _____. (10)
19. Two methods of transmitting _____ data over telephone network are facsimile & teletext. (6)
21. On / Off or Coded signals are referred to as ____ signals. (7)
23. A common household ____ control unit is the garage door opener. (6)
26. AM broadcast stations are in the ___ (Mid Frequency) range. (2)
28. RADAR is based on the use of ____ radio signals. (9)
29. The communication media greatly degrades and ___ the information signal. (10)
31. Land mobile, Cellular telephones, Military, Radar & Navigation & Amateur Radio are five major uses of the _____ band. (3)
34. An original voice, video or data signal voltage is called as the ____ signal. (8)
37. One-way communication is called ____. An example is radio and TV broadcasting. (7)
39. The three common sources of interference are the _____, manufactured equipment and thermal agitation in components. (10)
45. Common power line frequencies of 50 & 60 Hz are in the _____ (Extremely Low Frequency) range. (3)
47. Limited interconnections of PCs & other computers in offices or buildings are called ____s. (3)