



# EE VISION

IEEE — UAE SECTION NEWSLETTER

INSTITUTE OF ELECTRICAL  
AND ELECTRONICS  
ENGINEERS INC.

Vol 3 Issue 2

December 2003

## Chairman's Message



Our usual biannual "EE Vision" newsletter is ready to entertain our readers. It is the result of IEEE UAE Section's great efforts and success stories that has placed IEEE in the leading position amongst the players of power and IT industry. IEEE is the main catalyst of most of the advances in the technology race and has contributed to many emerging technologies worldwide.

IEEE's reputation in professional deliverables has exceeded that of any other professional body worldwide. Globally speaking, it is the largest professional organization with more than 380,000 members worldwide. It is one of the oldest professional bodies which was founded in 1884 in New York City under the name of American Institute of Electrical Engineers (AIEE.) Institute of Radio Engineers (IRE) was founded in 1912 and later on the 1<sup>st</sup> of January 1963 merged with AIEE to form what is known as IEEE. IEEE consists of 37 technical societies.

Lately, it has added a new Nanotechnology Council that sponsors lectures, symposia and workshops. The Council produces several publications and is working on standards focused on nanotechnology. Some of the famous standards are IEEE 802.3,ab,u,z (Ethernet,) IEEE 802.5 (Token Ring,) IEEE 802.11a,b,g (Wireless Networks,) etc.

In UAE, the IEEE Executive Committee has been working closely with the electrical, electronics, IT and computer engineers to spread the awareness of its role in the advancement of electro-technology in this country and facilitate the actual transfer of technology.

Consequently, it was necessary to establish a strong link with the industry and hence an Industrial Relation Officer (IRO) was assigned to fulfill this mission. We hope that our contribution would be appreciated and our efforts would be fruitful.

Dr.Eesa Bastaki, *Chairman, IEEE UAE Section*

## From the Editor's Desk: Lessons From Recent Power Blackouts



It was no more than a 10-second event. A tree brushed a power line; switches failed; power line operators knew nothing in the beginning and could not do anything to contain it later... That's how a massive blackout was initiated in the Ohio-based FirstEnergy Corporation's transmission feeder which plunged eight US states and the Canadian Province of Ontario into darkness on 14, August. Fifty million citizens were paralyzed over several days; tens of thousands of commuters were stranded; several trapped in building lifts, the functions of hospitals, airlines and businesses were jeopardized. That reminded once again the importance of electricity in our daily lives like the air we breathe. The estimated economic cost of blacking out New York, Detroit, Toronto and hundreds of towns and communities in eight states approached \$6 billion. The blackouts that occurred later in England, Italy and Scandinavia, though to a much lesser degree, illustrated the complexity of interconnected systems and their operational risks.

While the exact combination of human, mechanical and systemic failure that caused the Northeast blackout is still not known, there are major lessons derived from the events. Following the electricity deregulation, the bulk generation has resulted in marked increase in power transfers over long distances stretching the limits of transmission networks beyond its capabilities. Many utilities have cut costs and staff to prepare for de-regulation including resources for maintaining transmission lines. The grid has become centralized and interdependent to the extent that a problem at Ohio could affect Manhattan. Besides the above, proper accountability was missing among the regulators, utility managers and reliability enforcers.

Some of the steps suggested to avert future occurrences of such incidents includes enactment of mandatory reliability standards, implementation of cost-effective energy efficiency and demand management measures, adding decentralized technologies for managing electricity demand, diversifying the energy supply and generating on-site power to increase the reliability and resilience of the system.

UAE is now in the process of establishing a national grid (ENG). It is also a constituent in the GCC interconnection project, besides being a pioneer in the utility restructuring in this region. Therefore the lessons of the recent events are of paramount importance to shape the power system planning, implementation and operation policies of this country.

Eng. A. Suhair, *Chairman, Newsletter & Publications*

## Inside this issue:

Chairman's Message	1
From the Editor's Desk	1
From the Secretariat	2
QFD-Quality Concepts	3
Word power Semi conductor Technology	5
Meetings, Seminars	6
Section Activities	7
Industrial visit	8
IEEE News-From Far & Near	8

## IEEE-UAE Section Executive

Dr.Eesa M. Bastaki  
Chairman,  
e.bastaki@ieee.org,

Eng. Syed Riyazul Hassan  
Vice Chairman,  
uptc@emirates.net.ae

Eng. A.G.Hareendralal  
Secretary,  
hareendralal@ieee.org

Eng. Taj K. S.  
Treasurer,  
crown@emirates.net.ae

Eng. Joseph Peter M.  
Nominations & Awards,  
empee@emirates.net.ae

Dr. Nasser Qaddoumi  
Student Counselor,  
nqaddoumi@aus.ac.ae

Eng. K.R.Venugopal  
Membership Development,  
kr.venugopal@dewa.gov.ae

Dr.Mohamed G.El Tarhuni  
Industry Relations  
mohamed.el-tarhuni@ieee.org

Eng. Maryam Al Thani  
Women in Engineering  
maryam@ieee.org

Eng. A. Suhair  
Newsletter & Publications  
suhair@ieee.org

Website: [www.ehw.ieee.org/r8/uae](http://www.ehw.ieee.org/r8/uae)

## From the Secretariat



This year marked the 40<sup>th</sup> anniversary of IEEE. UAE Section celebrated this event in a fitting manner. The total membership of the Section as on 31<sup>st</sup> Oct 2003 is 552. An Affinity group of Women in Engineering was formed by the middle of this year. Within this short span of time, this group with 35 members has shown tremendous potential. The two chapters under the Section, viz. PES Chapter and Computer Society Chapter were also very active. A petition to form a Sub-section in Abu Dhabi has already been sent and its approval is awaited.

The table below gives the abstract of the technical talks conducted this year:

Sl No	Date	Subject	Speaker	Organisation	Venue	Sponsoring Organisations
1	15-Jan	Environmental Management - Looking at Environmental Management Systems such as ISO 14001	DR. RICHARD JOHN PERRY	The Manager of the Planning and Projects for ERWDA	The Cultural Foundation, Abu Dhabi	UAE Section
2	8-Feb	Power System Harmonics	Mohamed H. Shwehdi, Ph.D.	King Fahd University of Petroleum & Minerals (KFUPM), Saudi Arabia.	American University of Sharjah	UAE Section, PES Chapter, Computer Society Chapter, Student Branch - AUS University
3	1-Apr	"Web Based Monitoring and Control of Industrial Plant"	Dr. Abdul Rahman Al Ali	American University of Sharjah	Ajman University of Science & Technology,	UAE Section, PES Chapter
4	30-April	"Electrical Safety of Medical Equipment"	Professor Hasan A. Al-Nashash	American University of Sharjah	Emirates Scientific Club, Dubai	UAE Section, PES Chapter
5	3-Jun	Evolution of Mathematical Concepts Through the Ages	Professor Ganti Prasada Rao,	Fellow IEEE	The Cultural Foundation, Abu Dhabi	UAE Section, PES Chapter
6	4-Jun	Control in an Information Rich World	Professor Abdulla Ismail	UAE University	Dubai Airport Free Zone Authority	UAE Section, PES Chapter
7	27-Aug	Public Speaking Skills for Engineers	C.G.Ganesh	DUBAL	Dubai Airport Free Zone Authority	UAE Section, PES Chapter, Women in Engineering Affinity Group
8	10-Sep	Field Oriented or Flux Vector Control of AC Machines	Dr Habib ur Rehman	UAE University	American University of Sharjah	UAE Section, PES Chapter, Women in Engineering Affinity Group
9	1-Oct	Digital Watermarking and Information Hiding	Prof. H. Al-Ahmad & Dr. Mohammed Al-Mualla	Etisalat College of Engineering, UAE.	Society of Engineers, Sharjah	UAE Section, Computer Society Chapter
10	15-Oct	Advanced Industrial Process Control: State of the Art and Future Trends	Professor Mamar Beltayeb	University of Sharjah	Dubai Airport Free Zone Authority	UAE Section, PES Chapter, Women in Engineering Affinity Group, Computer Society Chapter
11	22-Oct	Document Management System	Ziad S. Nakkouzi	Etisalat - U.A.E.	Society of Engineers, Sharjah	UAE Section, Computer Society Chapter

In addition, visits to Thuraya Ground Station, Dhaid and Dubal, Dubai were also organized, which invited good response from the members. This year-end the Section is sponsoring an International Conference ICECS2003.

### 10<sup>th</sup> International Conference on Electronics Circuits and Systems (ICECS2003)

Under the patronage of His Highness Sheikh Dr. Sultan bin Mohammed Al-Qassimi, Ruler of Sharjah, Member of the Supreme Council, the 10th International Conference on Electronics Circuits and Systems (ICECS2003) will be held on the 14th -17th December 2003, at the University of Sharjah, United Arab Emirates. ICECS 2003 is co-organized by the University of Sharjah and Etisalat College of Engineering.

ICECS is an internationally well-known prestigious conference sponsored by the Institute of Electrical and Electronics Engineers (IEEE) and IEEE Circuits and Systems Society. The conference has been organized to encompass both the theory and technology, and their design and applications. In ICECS 2003, the authors will present their latest research results, ideas, developments, and applications in all areas of electronics, circuits and systems. The participants will be exposed to recent developments on: circuit theory, digital signal processing, VLSI, Multimedia & communications, neural systems, biomedical applications, computational methods and optimization and power systems and control.

There was a total of 551 submitted papers from 56 countries. The local organizing committee has already accepted 398 papers and the expected attendance is between 400 to 500 scientists/ engineers/ academics participating and presenting papers from around the world.

This conference will provide crucial support to promote the United Arab Emirates internationally as a hub for education and science in addition to exhibiting the advanced infrastructure for business, investment and tourism. Registration for the conference is available online on <http://www.icecs2003.org>.

**Dr. Arif Sultan Al-Hammadi**

## QFD - The Quality Concept for Today's Customer-Focused Society

Felipe C. Abala

One of the founders of Quality Function Deployment (QFD), Dr. Yoji Akao, in his private lectures said: "Time was when a man could order a pair of shoes directly from the cobbler. By measuring the foot him self and personally handling all aspects of manufacturing, the cobbler could assure the customer would be satisfied". (The Quality Function Deployment Institute)

Today it seems everyone is striving to be the organization (employer or supplier) of choice, may it be profit-oriented entity, not-for-profit organizations and even governmental departments. The media, professional journals, books, and other sources of information are overwhelmingly crammed with new concept and models of organizational development programs. Quality Management methodologies such as Total Quality Management, Continuous Improvement, Business Process Reengineering, Concurrent Engineering, Lean Enterprise Management, Six Sigma Methodology, Quality Function Deployment and many other techniques have been increasingly adopted by various organizations in order to increase their organizational productivity and improve the quality of their products or services. All of which are directed towards reducing waste of time, materials, energy and other resources while satisfying customers' requirements and delivering it at the right time.

In today's changing environmental demands, i.e. customers/clients/end-users demand a quality product or service, organizations, if competitiveness is crucial to its stability and existence, has to positively respond to that need by implementing development programs aimed at improving organizational effectiveness. However, moving towards organizational change does not only entail program design and formulation of action plans. One has to pick up the right technique that is timely and relevant to the need of the time.

Quality Function Deployment (QFD) is a system that pays special attention to customer wants and integrates these into the marketing, design, manufacturing, and service processes. Activities that do not contribute to customer wants are considered wasteful. (The Institute of Industrial Engineers)

QFD was developed to bring this personal interface to modern manufacturing and business alike. In today's industrial society, where the growing distance between producers and users is a concern, QFD links the needs of the customer (end user) with design, development, engineering, manufacturing, and service functions. It helps organizations seek out both spoken and unspoken needs, translate these into actions and designs, and focus various business functions toward achieving this common goal. QFD empowers organizations to exceed normal expectations and provide a level of unanticipated excitement that generates value. (The Quality Function Deployment Institute)

In this issue of the IEEE UAE Section News Letter, I would like to briefly highlight the QFD concept as defined by The Quality Function Deployment Institute. This concept is perceived to be timely and relevant to the present thrust of market globalization in general and the UAE economic programs in particular. Engineers in the UAE could play a pivotal role in the development and support of a competitive market in response to the government's effort of establishing an economy independent from its oil revenues. The application of QFD in the UAE based organizations will perhaps contribute to this desired outcome.

The following excerpt from a document by The Quality Function Deployment Institute in a question and answer format could help explain further the concept of QFD:

How does QFD differ from other quality initiatives?

QFD is quite different in that it seeks out both "spoken" and "unspoken" customer requirements and maximizes "positive" quality (such as ease of use, fun, luxury) that creates value. Traditional quality systems aim at minimizing negative quality (such as defects, poor service). With those systems, the best you can get is zero defects - which we see is not enough when all the players are good - or in products that fail to sell despite being defect-free.

What are the characteristics of QFD as a quality system?

- QFD is a quality system that implements elements of Systems Thinking (viewing the development process as a system) and Psychology (understanding customer needs, what 'value' is, and how customers or end users become interested, choose, and are satisfied, etc.).
- QFD is a quality method of good Knowledge or Epistemology (how do we know the needs of the customer? how do we decide what features to include? and to what level of performance?)
- QFD is a quality system for strategic competitiveness; it maximizes positive quality that adds value; it seeks out spoken and unspoken customer requirements, translate them into technical requirements, prioritize them and directs us to optimize those features that will bring the greatest competitive advantage.
- Quality Function Deployment (QFD) is the only comprehensive quality system aimed specifically at satisfying the customer throughout the development and business process -- end to end.

How long has the methodology been around? Research papers on then-emerging QFD concepts began appearing in Japan in the 1960s. It was not until 1983 when the ASQ's Quality Progress magazine published an article on QFD, followed by the Kaizen Institute (then Cambridge Research) inviting Dr. Akao to Chicago to give a lecture on QFD that it was presented to an American audience.

**What industry and business are using QFD?**

QFD can be and has been applied in virtually every industry and business, from aerospace, manufacturing, software, communication, IT, chemical and pharmaceutical, transportation, defense, government, R&D, to service industry. Organizations that have in the past presented at the Symposium on QFD include 3M, AT&T, Accenture, Boeing, DaimlerChrysler, EDS,

Ford, GM, Hewlett-Packard, Hughes, IBM, Kodak, Lockheed-Martin, Pratt & Whitney, Motorola, NASA, Nokia, Raytheon, Texas Instrument, United Technologies, Visteon, Xerox and many other Fortune 500 companies.

Why is a conventional design process not sufficient? Conventional design processes focus more on engineering capabilities and less on customer needs. When they do try to incorporate customer perspectives, these tend to be engineer-perceived or producer-perceived. Quality Function Deployment (QFD), however, focuses like a laser all product development activities on customer needs.

#### What are "expected quality" and "exciting quality?"

"Expected" quality or requirements are essentially basic functions or features that customers normally expect of a product or service. "Exciting" quality or requirements are sort of "out of ordinary" functions or features of a product or service that cause "wow" reactions in customers. Expected requirements are usually invisible unless they become visible when they are unfulfilled. Exciting requirements are also usually invisible unless they become visible when they are fulfilled and result in customer satisfaction. They do not leave customers dissatisfied when left unfulfilled.

The original research on expected vs. exciting quality was conducted and reported in a paper called "Must Be Quality" by Dr. Kano, Japan.

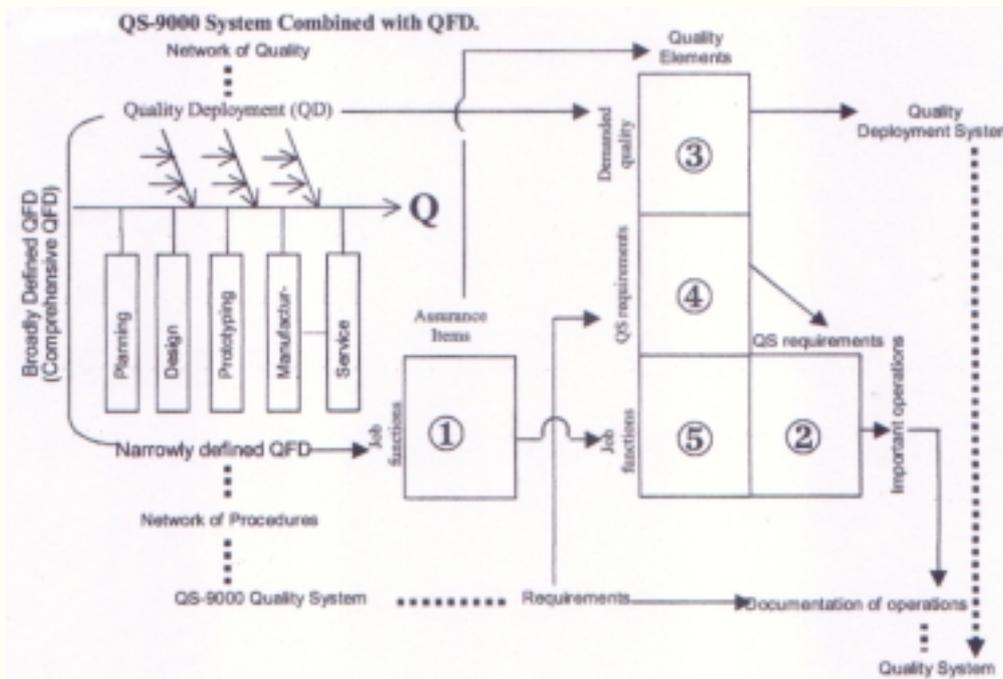
#### How does QFD offer strategic advantage?

The expected and exciting requirements provide the best opportunity for competitive advantage - if you can find a way to make them visible and then deliver on them. However, in this fast changing world, hitting the right target of customer satisfaction is made more difficult by fragmenting customer segments, new technology, and competitive pressures. QFD makes invisible requirements and strategic advantages visible, allows you to prioritize and deliver on them in a focused product development process.

#### QFD in Compliance to ISO Standards

"The purpose of ISO is to assure that an organization can create and then follow processes, using some degree of management science. The purpose of QFD is to aim that process at producing new goods and services. Thus, without a solid ISO, TQM, or Six Sigma process, QFD will not go very far. Similarly, just having ISO will improve existing operations, but QFD will help build future competitive products based on the needs of the customers", Mr. Mazur, author-lecturer on QFD and a close associate of Dr. Yoji Akao (one of the Founders of QFD), said in his email message.

For comparative purposes between ISO and QFD as well as a brief illustration of its methodology, let me quote a complete document entitled "USING QFD TO ASSURE QS9000 COMPLIANCE" written by Dr. Yoji Akao and Glenn H. Mazur (Japan Consultants Ltd.).



**Felipe C. Abala** has graduated in Industrial Engineering in 1987. He has been working in the U.A.E. Armed Forces - General Maintenance Directorate, Abu Dhabi, United Arab Emirates since 1992. He is currently their IT Project Manager. He is member of several professional bodies and a senior member of IEEE

## Word Power in Semi-conductor Technology

*Dr. Eesa Bastaki, Director, Education, Training, Research & Development, Dubai Silicon Oasis*

**Die** An individual integrated circuit or discrete device. When a wafer is completed through the fabrication process the surface of the wafer contains many individual die, also called chips.

**Depreciation** A percentage of the cost of capital equipment is written off each year and is called depreciation. Typically five year for process equipment, ten years for facility systems and thirty years for the bricks and mortar.

**Depletion region** An area of a semiconductor where all of the mobile carriers have been swept out by an electric field. The depletion region is depleted of carriers hence the name.

**Diffusion** A process whereby a substance redistributes from an area of relatively high concentration to an area of relatively low concentration due to random thermal motion. The larger the concentration gradient the faster diffusion occurs for a given temperature, conversely, the higher the temperature the faster diffusion occurs for a given concentration gradient.

**Etching** The process of removing a material by chemical reaction.

**Dry Etch** A process whereby etching is accomplished by a reactive gas as opposed to a liquid. Dry etching techniques include plasma etch, reactive ion etch, magnetically enhanced reactive ion etch, inductively coupled plasma, electron spin resonance, etc.

**Epitaxial Layer** A single crystal layer formed on top of a single crystal substrate. An epitaxial layer will typically have a different doping level and or type than the substrate upon which the epitaxial layer is formed. In some cases the epitaxial layer may be a completely different type of material than the substrate upon which it is grown. If the substrate and the epitaxial layer are both the same element or compound then the process is homoepitaxy and if the epitaxial layer and the substrate are different elements or compounds then the process is heteroepitaxy. see also, crystalline.

**Crystalline** A material state where the atoms making up the material are arrayed in a consistent repeating pattern.

**Fab (Wafer Fabrication)** The process of creating integrated circuits on the surface of wafers.

**Wafer Fabrication Facility (Wafer Fab or Fab)** A facility where the wafer fabrication process is performed. Fabs include a high quality clean room as well as support systems such as ultrapure water, gas and chemical generation and delivery systems, waste water treatment, extension HVAC equipment, as well as other support functions.

**Fabless** A semiconductor company that uses foundries for all of its wafer fabrication requirements.

**Foundry** A wafer fabrication facility that processes wafers for other companies as a service.

**FPGA (Field Programmable Gate Array)** A circuit made up of logic gates where the logic gate connections can be readily programmed into specific configurations.

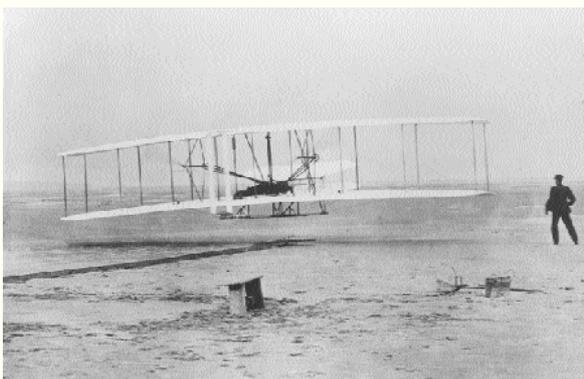
**Gallium Arsenide** A semiconductor formed by combining gallium, Ga and arsenic, As. Gallium arsenide has a higher electron mobility, operates at higher temperatures and provides higher frequency performance than silicon. Gallium arsenide use has increased in recent years due to cell phones but is still a small fraction of silicon's usage due to difficulties in gallium arsenide fabrication.

**Mask** A glass plate with a pattern of transparent and opaque areas used to photolithographically create patterns on wafers. A mask is commonly used to refer to a plate that has a pattern large enough to pattern a whole wafer at one time. See also, reticle.

**Mask Layer** A method of characterizing the complexity of a process. A mask layer is all of the process steps associated with a particular mask.

**Reticle** A glass plate that contains a pattern of transparent and opaque areas. A reticle contains the pattern for one or more die but is not large enough to transfer a wafer sized pattern all at once.

### Flying celebrates centenary



This is an exact copy of the aircraft in which the American Wright brothers made the world's first powered, sustained and controlled flights on **17 December 1903**.

Wilbur Wright's key insight was to realize that birds keep their lateral balance (control when banking) by twisting their wings. He devised a kite which reproduced the same effect mechanically, allowing it to roll one way or the other as desired. Before developing a powered aircraft, the brothers tried out the new technique for several years using gliders, aiming 'to escape accident long enough to acquire skill sufficient to prevent accident'. They also hit on the essential principle of combining rudder control and roll for smoother balanced turns.

## IEEE UAE Section Activities—Meetings, Seminars



### Control in an Information Rich World : Dr. Abdullah Ismail, UAE University—4th June, Dubai Airport Free zone Authority

The field of control provides the principles and methods used to design physical and information systems that maintain desirable performance by sensing and automatically adapting to changes in the environment. Over the last forty years the field has seen huge advances, leveraging technology improvements in sensing and computation with breakthroughs in the underlying principles and mathematics. Automatic control systems now play critical roles in many fields, including manufacturing, electronics, communications, transportation, computers and networks, and many military systems.

As we begin the 21st Century, the opportunities for control principles and methods are exploding. Computation, communication and sensing are becoming increasingly cheap and ubiquitous, with more and more devices including embedded processors, sensors, and networking hardware. This will make possible the development of machines with a degree of intelligence and reactivity that will impact the life of everyone on the planet, both in terms of the products available and the very environment in which we live. New developments in this increasingly information rich world will require a significant expansion of the basic tool sets of control. The complexity of the control ideas involved in the operation of the Internet, semi-autonomous systems, and enterprise-wide supply chain management, for example, are on the boundary of what can be done with available methods. Future applications in aerospace and transportation, information and networks, robotics and intelligent machines, biology and medicine, and materials and processing will create systems that are well beyond our current levels of complexity, and new research is required to enable such applications.

The purpose of this talk is to demonstrate some of the exciting prospects for control in the current and future technological environment, to explain the critical role we expect the field to play over the next decade, and to recommend actions required to maintain the vitality and impact of control research.



### Public speaking Skills for Engineers - Eng. C.G. Ganesh, Head of Plant Instrument Engineering, DUBAL, 27 August, Dubai Airport Free zone Authority

- \* What is Public Speaking Skill?
- \* Why is it required for Engineers?
- \* What are the aspects of Public Speaking?
- \* How this could be developed?
- \* How one can continuously improve the skill?

The speaker stressed the importance of public speaking skill requirement for Engineers. A good communication skill has become as important as technical knowledge for Engineers. The public speaking skill will help Engineers to present their Technical and non technical presentation more effectively & impressively. The need for including the public speaking skill as part of the curriculum of Engineering was stressed by the speaker. It is not that only politicians need to be good public speakers. but each and every one who intend to go high up in the career should consider the development of this skill. This is like any otherskill , could be learned. The speaker himself being an Engineer realised this importance and is a member of Toastmasters International which is a non- profit organisation dedicated for developing public speaking skill. Some of the members decided to join Toastmasters after his speech. The meeting was well attended by the IEEE members



### Advanced Industrial Process Control: State of the Art and Future Trends: Professor Maamar Bettayeb, Electrical/Electronics & Computer Engineering Department—15 October, University of Sharjah

Several inherent characteristics of industrial processes pose important challenges to the modeling and control of such processes. These include uncertainties, time delays, nonlinearities, time-varying parameters, constraints, multivariable interactions, data filtering and reconciliation. Model based Advanced Control Technologies, including model predictive control, robust control and artificial intelligence techniques, offer promising solutions. A thorough overview of such challenging problems and promising solutions for the modeling and control of industrial processes is presented. The state of the art of advanced control in the process industry is highlighted. Future trends, including the recently adopted platform, The Foundation Fieldbus are discussed.

## Section Activities

### Women in Engineering (WIE) Affinity Group



The WIE Affinity group – UAE section came into existence on 2nd June 03. A get-together meeting was held in Al-Ain, UAE University on 3<sup>rd</sup> June 2003 to announce the formation of the group to the media. Another meeting was held with Mr. Ahmed Al Darmaki, Director, Planning, Abu-Dhabi Water and Electricity Authority to co-operate and to build relation between our Section and the company. It was agreed that IEEE will arrange a workshop in the distribution/protection in the power industry which will be sponsored by the company. In August, a

seminar on "Presentation Skills for engineers" was organized. In September, a survey was initiated among lady engineers in UAE to get their opinions for bettering the position of women engineers. Discussions were held with Ms. Dana Abu al Nasser, Associate Professor in American University of Sharjah, regarding how to encourage ladies engineers to work after graduation in their field. It was agreed to organise a forum of lady engineers in different fields in UAE. A brochure about IEEE and WIE was designed by WIE group member in October. WIE is planning many future activities to promote the participation of women in the engineering field.

**Ms. Maryam Al Thani**, *Chairperson, WIEA Group*

### Computer Society Chapter

The IEEE computer society, UAE chapter, IEEE UAE section and UAE society of Engineers have organized two technical talks in the year 2003, the first one was on Digital Watermarking and Information Hiding given by Prof. H. Al-Ahmad & Dr. Mohammed Al-Mualla from Etislat College of Engineering. The second talk was on Document Management System and was presented by Mr. Ziad S. Nakkouzi, Project Manager – Document Management System. Emirates Telecommunications Corporation (Etisalat) - U.A.E. A website was created for the IEEE computer society, UAE chapter <http://www.emirates.org/ieee/> the web site includes links to the presentations given.

**Dr. Arif Sultan Al-Hammadi**, *Chairman, Computer Society Chapter*

### Power Engineering Society Chapter

A meeting of the PES Chairmen of Region 8 was held at Bologna, Italy on June 22<sup>nd</sup> 2003. In order to have a close liaison with the academia and industry it was suggested to organise short events with speakers from academia on subjects relevant to industry. In order to increase co-operation between the chapters each time a chapter organises an event, the chapter chair will systematically send e-mail to all Region 8 chapter chairs with the details of the event. Er.A.G. Hareendralal, Chairman, PES Chapter, represented UAE in the meeting.

**Eng. A.G. Hareendralal**, *Chairman, PES Chapter*

### Region 8 Meeting at Zagreb



Meeting of IEEE Region 8 Committee took place on the weekend of October 11 & 12 at the Hotel Opera in Zagreb, Capital of Croatia. It is a very friendly city with many historic landmarks. The Training and Orientation Meeting for New Section Chairs and specially invited volunteers took place in the afternoon) on Friday, 10th October, 2003. Professor Tony Davis, Director Region 8 opened the meeting, welcoming the guests from the IEEE Board of Directors and members of Region 8 Committee and other attendees. Given below are some of the important issues discussed at the meeting: 1. Agreement with National Societies -Ted Hissey reminded about the importance of the agreement negotiated by IEEE (Refer to website [www.ieee.org/nsa](http://www.ieee.org/nsa)) 2. IEEE Founda-

tion - Presentation on the work of the Foundation by- Rolf Remshardt 3. Treasurer's Report: -Hans Schmitt pointed out that the main costs are towards the two Region 8 meetings each year and the publication of 4 issues of R8 news. We may have to cut down one meeting to stop drawing down of R8 assets unless some other alternative solution is found. 4. Reports from Vice Chairs for various activities including Student Activities by Piler Molina Gaudo. 5. Proposal for the Introduction of section reviews by Mr. Tariq Durrani -A pilot study would be held first, starting with sections that have difficulty in reporting to Piscataway and subsequently all the sections to be assessed every five years. There was much appreciation for the smooth and almost flawless organization of the meeting by Mr. Aleksandar Szabo, IEEE Croatia Chair and his Colleagues. The Director closed the meeting with a vote of thanks to them and all the other Participants. The next region 8 committee meeting (Spring time) shall be held in Crawcow (Poland) on 24th & 25th April, 2004.

**Eng. Syed Riazul Hassan Zaidi**, *Vice-Chairman, UAE Section*

### Industrial Visit to DUBAL



A group of IEEE UAE section members participated on an industrial visit to Dubai Aluminum Company (DUBAL) on October 23, 2003. DUBAL is a major producer of aluminum products located in Jabel Ali close to Dubai.

The visit started with a talk by DUBAL engineers about the history of DUBAL and a technical presentation on the process of aluminum production. An overview of the company's electric power supply and water desalination facilities was also presented. IEEE members had a guided tour through the different facilities including Casthouse, Carbon, Potlines, and power and desalination. IEEE members had many discussions with DUBAL

engineers and they had a good chance to meet with other members. The trip was well received by the participants and at the end DUBAL representatives presented souvenirs to all members.

*Dr. Mohammed Al Tarhuni, IRO*

### IEEE News from Far and Near

#### IEEE President Elect—2004

Mr. W. Cleon Anderson has been selected as the 2004 IEEE President-Elect. Anderson will begin serving as IEEE President on 1 January 2005. He will succeed 2004 IEEE President Arthur W. Winston. Anderson, who is chief project engineer at L-3 Communication Systems-West in Salt Lake City, Utah, is an IEEE Senior Member. He currently is the vice president of Regional Activities and is a member of the IEEE Board of Directors.

#### CONGRATULATIONS

##### New Senior Members

The following members were elevated as senior members during 2003.

M/s Felipe C. Abala, Younes Bahar Arjmand, Moh'd A. Radaideh, Fatima M. Al Dhaheri, Michael P. Joseph, Satish K. Menon, Tamer Rabie, Saad Harous, Hasan A. Al-Nashash, Najib H. Dandachi, Ashraf Elnagar, Janamitra B P Hapukotuwa, Zulfiqar Ali Memon

**Dr Nidhal Abdulaziz**, University of Wollongong in Dubai won the Douglas Lampard Electrical Engineering Research Prize and Medal for 2002 from the Department of Electrical and Computer Systems Engineering, Monash University, Australia. the prize is for the best PhD thesis submitted to the Department for 2001/2002, the thesis title "Digital watermarking and data hiding in multimedia".

**Professor Saleh Al-Araji**, Head of Communication Engineering Department, Etisalat College of Engineering was nominated as Member of the IEEE 802.17 RPR Standards Working Group.

The **IEEE 802.17 Resilient Packet Ring Working Group (RPRWG)** is defining a Resilient Packet Ring Access Protocol for use in Local, Metropolitan and Wide Area Networks for transfer of data packets at rates scalable to many gigabits per second. The new standard will use existing Physical Layer specifications and will develop new PHYs where appropriate. In Metropolitan and Wide Area Networks, fiber optic rings are widely deployed. These rings are currently using protocols that are neither optimized nor scalable to the demands of packet networks, including speed of deployment, bandwidth allocation and throughput, resiliency to faults, and reduced equipment and operational costs.

**Dr.Mohammed EI-Tarhuni**, Industrial Relations Officer,UAE Section attended the IR meeting held at Paris from 29th-30th November 2003.

**AGM-2003:** Annual General Meeting of 2003 is will be held at 6.30 pm on Thursday, 18th Dec 2003 at Hotel Rotana Towers, Sheikh Zaid Road, Dubai

#### To Ponder..

This is the true joy in life--being used for a **purpose** recognized by yourself as a mighty one; being thoroughly worn out before you are thrown on the scrap heap; being a force of nature instead of a feverish selfish little clod of ailments and grievances. - George Bernard Shaw

More men fail through lack of purpose than lack of talent. -William Ashley

Teachers open the door. . . You enter by yourself --Chinese Proverb