



SAEINDIA

NORTHERN SECTION

The Engineering Society
For Advancing Mobility
Land Sea Air and Space

Celebrating a decade of Knowledge Enhancement

From Senior Vice Chairman's desk



It gives me immense pleasure in reaching out to SAENIS fraternity and extend my warm greetings through this SAEINDIA Northern Section Newsletter "Sampark". I am happy to see the growth of our section since year 2000 onwards. I recall the initial days when we started SAE activities with the support of Mr. Murli Iyer, SAE International, USA. His guidance and encouragement has laid down a strong foundation for our section.

The basic aim of starting these SAE activities is to benchmark international best practices in automotive technologies and to get the information about latest technologies available worldwide and imparting the same to young engineers in Engineering Colleges and auto industry.

During the initial days, I was happy to shoulder the responsibility of Secretary SAENIS and Secretary SAEINDIA. Our aim was to promote SAE membership in OEMs in Northern Area, auto component industry and student chapters in IITs and Regional Engineering Colleges.

We were successful in doing all the above activities because senior people in Maruti took active participation in promoting SAE activities in India along with our team.

SAENIS has organized 3 International Mobility Conferences in 2000, 2004 and 2008 successfully and is going to host SIIMC 2012 next year. We also started activities like AWIM (A World In Motion) and Jet Toy concept for the young students in schools. Twenty years ago, the leaders of SAE International embarked on a plan to help, enhance and increase the Science, Technology, Engineering, and Mathematics (STEM) skills of elementary students.

I am very thankful to Mr. Murli Iyer and all the previous SAE Presidents in extending their full support to SAENIS and hope the same in future also.

R.B.Madhekar
Senior Vice Chairman
SAENIS



Engineering Simulation in Hybrid Electric Vehicles and Electric Vehicle

This seminar focused on the significance, business challenges and trends in HEV/EV. A replacement to the conventional gasoline and diesel engine, this is the next big thing to look out for!

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Front-Loading the Calibration over the development cycle

This seminar discussed some methods to optimize effort along the development lifecycle and make it "reusable" using tools like CaliAV

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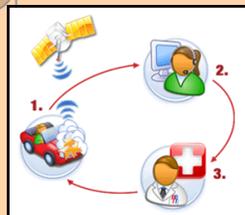
A World In Motion – Master Teachers' Training Programme

The Master Teachers' Training Programme (MTTP) was conducted for both school teachers as well as student and industry volunteers wherein they learn, implement and go through different phases of the engineering design experience.

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TECH BUZZ

E-Call



A service that can reduce the response time of the emergency services in case of a mishap. When a road accident occurs, the promptness with which rescue services are mobilized is of utmost importance for saving lives or reducing the effect of injuries. In case of an emergency situation, or even in case of a crash, eCall can dramatically reduce the response time of the emergency services.

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Engineering Simulation in Hybrid Electric Vehicles and Electric Vehicle, 12th July 2011, Gurgaon



This seminar on HEV/EV was conducted in collaboration with Ansys. With air pollution & petroleum supplies being the issue of concern, the use of HEV/EVs have come to the forefront as an alternative to conventional gasoline & diesel engines. Governments worldwide are now promoting HEV/EV research. This seminar shed light on the various aspects of HEVs with a special focus on simulation.



The seminar saw an attendance of around 45 people from Maruti Suzuki, Sona Group, Hero Honda Motors and students from College of Technology Pantnagar and Arya College of Engineering & I.T, Jaipur.

The event started-off with a presentation by Mr. Deepak Katyal which set the tone for the event.

This seminar gave insight into the Significance, Business Challenges & Trends in HEV/EV. The speakers highlighted the various aspects of product development process challenges in HEV/EV related to Power source, Converter, Invertor, Electric Machine and other HEV/EV configurations challenges.



"with governments .across the globe promoting HE/EV research, the potential challenges were discussed and sources for power explored "



Front-Loading the Calibration over the Development Cycle, 2nd August 2011, Gurgaon



Short time to market is leading to tight development timelines and the systems are becoming more complex. This calls for advancing the calibration tasks to the early stages of development and automating

calibration tasks to increase the efficiency of calibration.

Early and detailed diagnostics of the control functions & the system is also becoming crucial, adding to the complexity.

This seminar focused on the ways to reduce the development

lead time using INCA, and showcased methods to optimize effort along the development lifecycle and make it "reusable" using tools like CaliAV."

"development lead time can be reduced using INCA"



A World In Motion – Master Teachers’ Training Programme, 23rd July, New Delhi

SAEINDIA has been conducting a HR/CSR initiative known as "AWorldInMotion@(AWIM)", annually for the last 4 years. Designed by the Society of Automotive Engineers (SAE), AWIM curriculum brings together teachers, students, practicing engineers and scientists in an exploration of physical science. The AWIM program comprises a series of four curricula referred to as Challenges; however in India, only the Jet Toy Challenge - for 6th grade students, is being organized. The students are provided with a kit containing raw material to build the toy and they are taught how to design, build and experiment with it. In this process, students



(MTTP) conducted for both school teachers as well as student and industry volunteers wherein they learn, implement and go through five phases of the engineering design experience: Set Goals, Build Knowledge, Design Build and Test, Decorate Decorate and Present.



The next step is training of the 6th grade school students by the teachers and volunteers in the same fashion, bringing them closer to science and mathematics in a joyful manner and enabling them to think out of the box.

This year the Northern Section of SAEINDIA conducted Master Teachers’ Training Programme at Sanskriti School, Chanakyapuri on Saturday, 23rd July 2011 from 9:00 am to 5:00 pm with 29 schools participating (24 from Delhi & NCR

Students explore science, engineering and design aspects. The first step for this activity is the Master Teachers’ Training Programme

+ 5 from Chandigarh).

Mr. Rakesh Sood, Chairman, AWIM Board and Managing Director, Trim India was the Chief Guest for the day. The training was conducted by Mr. Saurabh Chitnavis and Mr. Shailesh Kulkarni, SAENASIK division, from Mahindra and Mahindra Pvt. Ltd along with the support of Mr. Piyush Manocha and Mr. Ravi Kumar Goel, SAENIS division, from Maruti Suzuki India Ltd.

The training session began with an introduction to engineering, role of engineers in the society and a briefing about the JET TOY CHALLENGE. The Volunteers and Teachers actively took part in the question-answer session, worked effectively in a team and designed an appealing toy that performs in a specific way, such as travels far or carries weight.



The teachers experimented with different chassis designs and nozzle sizes to determine their effect on the Jet Toy's performance. Scientific concepts like force, friction, and air resistance were explored by the teachers & volunteers. First the toy was tested without a balloon and launched

from an incline. The vehicle was then revised and re- built to remove the previous faults. This went on even after the balloon motor was added to the toy for its propulsion. Toy testing helped in understanding the reasons behind the science concepts.

After building and testing the toy, the teachers and volunteers also gave presentations about their team and the vehicle. All of them gave a name, logo and tagline to the irrespective teams. They also faced questions put up by a team of judges. The doubts of the teachers and volunteers were answered by the trainer.

The event ended with the Felicitation Ceremony and a vote of thanks by Mr. Rakesh Sood and Mr. Saurabh Chitnavis.

Congratulations to Team AWIM!



TECH BUZZ

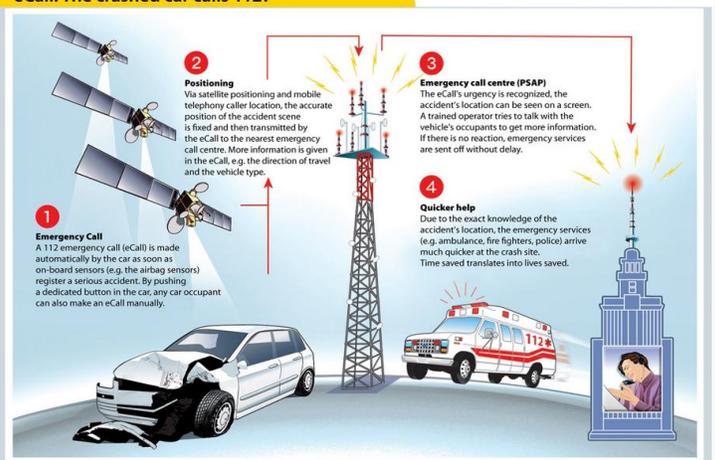
E-Call : Time saved= Lives saved

eCall is a project of the European Commission intended to bring rapid assistance to motorists involved in a collision anywhere in the European Union.

When a road accident occurs, the promptness with which rescue services are mobilized is of outmost importance for saving lives or reducing the effect of injuries. In case of an emergency situation, or even in case of a crash, eCall can dramatically reduce the response time of the emergency services.

eCall can either be generated manually by vehicle occupants or automatically via activation of in-vehicle sensors when an accident occurs. The in-vehicle eCall directly establishes a 112-voice connection with the relevant Public Service Answering Point (PSAP), and sends crucial information such as time and location of the accident, and a description of the vehicle involved. The information sent to the PSAP may also include a link to a potential Service Provider by including its IP address and phone number. If the user has subscribed to a Service Provider, additional information can be sent from the service provider to the PSAP

eCall: The crashed car calls 112!



*Reference: <http://en.wikipedia.org/wiki/ECall>
http://ec.europa.eu/information_society/activities/intelligentcar/technologies/tech_07/index_en.htm
http://ec.europa.eu/information_society/activities/esafety/ecall/index_en.htm
<http://www.e-call.at/ec/index.php?lng=e>

"A voice connection with the relevant Public Service Answering Point is established to get emergency service."

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