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Ceremonial Inauguration of 105th Annual Sessions of the IESL

The 105th Annual Sessions of the Institution of Engineers, Sri Lanka (IESL) was ceremonially inaugurated by Hon. Prof. G.L Peiris, Minister of External Affairs at the BMICH on 21stOct. 2011, Friday at 9.00 am in the presence of a large gathering of distinguished invitees, foreign delegates from sister institutions in the SAARC region, past presidents and members of the IESL. The Guest of Honour for the occasion was Hon. Patali Champika Ranawaka, Minister of Power and Energy. Hon.Geethanjana Gunawardena, Deputy Minister of Finance and Hon. P. Dayaratne, Minister of State Resources were Special Guests for the event. The keynote speaker for the event was Prof. Robin King from University of South Australia and Chair, Engineers Australia Accreditation Board.

The Chief Guest lights the traditional oil lamp while the President of IESL and other distinguished guests wait for their turn

Those at the head table standing up for National Anthem

Prof. A.K.W Jayawardane, the incumbent president of IESL in his welcoming address described engineering as a profession much to be proud of by its practitioners for its immense contribution to nation building, economic development and raising of standard of living of our countrymen through improved social management systems. He said that there is no better time than this for engineers to make significant impacts and make the profession even more prominent at a time when the country is making vast strides in development. He further said that the IESL during his tenure as president has made significant progress living up to the 4 goals that he had declared, to strive for, in his tenure, 'the year of outreach'. He said that significant progress have been achieved in the four goals : 1) enhancing the image of our profession and professional practice, 2) raising the international standing of the IESL, 3) enhancing member services and membership, and 4) positioning the IESL as an important educational provider.

Prof. A.K.W Jayawardane said that during his tenure the IESL had also engaged in several policy and advisory activities meeting key policy makers including His Excellency, the President to

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PRESIDENT'S SPEECH AT THE IESL INAUGURATION

It is with great pleasure that I stand before you this morning as the President of this esteemed Institution for the next term. I appreciate with great honour the Council and the members for having bestowed upon me, the opportunity to serve the Institution in this prestigious position.

My contribution to engineering is extremely moderate when compared with the great names of famous engineers whose names are inscribed in the frescoes around the Committee Room of the IESL. To quote Sir Isaac Newton the world famous scientist, *'We are indeed standing on the shoulders of giants'*. I can assure you that I shall do my utmost to cherish and protect our inheritance from a glorious past and shall endeavour, to the limit of my ability, to further the aims and the aspirations of our great Institution in this changing world.

During the last few days when I was preparing my Address, I became increasingly aware of the sense of history which pervades our Institution and of the aspirations and experiences of a past age, which are re-echoed in our ever-changing world of today. Although there may have been many such changes over the years, the fundamental concepts of our proud profession still remain.

My sense of history was deepened when by chance I discovered recently in a book entitled "*A journey by stage coach to the up country*" in

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The Institution of Engineers Sri Lanka

120/15, Wijerama Mawatha, Colombo 7, Sri Lanka.

Tel: 2685490, 2698426, 2699210
Fax: 2699202
E.mail: ed@sltnet.lk / iesl@slt.lk
Website: http://www.iesl.lk

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ANNUAL EVENTS CALENDAR - 2011/2012

Event	Dates
♦ Dr. Ray Wijeyewardene Memorial Lecture	Tuesday – December 13, 2011
♦ Eng. B D Rampala Memorial Lecture	Tuesday –December 20, 2011
♦ R H Paul Memorial Lecture	Thursday – February 09, 2012
♦ Induction and Graduation Ceremony	Friday – August 17, 2012
♦ E O E Pereira Memorial Lecture	Thursday – September 13, 2012
♦ D J Wimalasurendra Memorial Lecture	Monday – September 17, 2012
♦ Techno Exhibition	Friday – Sunday October 5-7, 2012
♦ Inauguration of the Annual Sessions	Friday – October 19, 2012
♦ Annual Sessions Seminar	Saturday – October 20, 2012
♦ Annual Field Visit	Sunday – October 21, 2012
♦ Presentation of Technical papers	Monday-Wednesday October 22-23, 2012
♦ Presentation of Technical papers by Young Members	Thursday - October 25, 2012
♦ Dr. A N S Kulasinghe Memorial Lecture	Thursday – October 25, 2012
♦ Techno Awards Ceremony	Wednesday – October 24, 2012
♦ Annual General Meeting	Saturday – October 27, 2012

Note:

Associate Members who wish to apply for the Professional Review, are strongly advised to attend all Memorial Lectures and keep a record of the attendance for any future reference.

THE INSTITUTION OF ENGINEERS, SRI LANKA
120/15, Wijerama Mawatha, Colombo 7.
Tel. 0112 698426 - 209, 210, 211
Fax : 011 2 699202, E-mail : deetiesl@sltnet.lk

CONTINUING PROFESSIONAL DEVELOPMENT (CPD) COURSES FOR THE SESSION – 2011

REGISTRATION FORM

Those who wish to follow the courses indicated below, please perfect this form and return the same to the IESL. Please mark "X" in the cage against the interested course/courses. The date of commencement of the course will be informed to you in due course.

Director – (EE&T), IESL.
Name: ……
Postal Address : ……
……
Membership No ……
E- Mail. : ……
Telephone (Office) ……
(Residence) ……
Mobile : ……

Course	Duration	Course Fee (subject to change)	Pl. mark "X"
Effective Communication	100 hrs every other Tuesdays	Rs.17,500/-	
Speehcraft Programme	10 Tuesdays from 1700 - 1900 hrs	Rs.10,000/- Rs.12,000/-	
Quality Assurance in Welding	05 Saturdays from 0900 - 1600 hrs	Rs.18,000/- Rs.20,000/-	
Accounting for Engineers	02 days from 0900 - 1600 hrs	Rs.7,000/- Rs. 9,000/-	
Highway Engineering	06 Saturdays from 0900-1600 hrs	Rs. 18,000/- Rs. 19,000/-	

Signature : ……..... .Date : …….

ANNUAL SUBSCRIPTION FEES FOR THE YEAR 2012

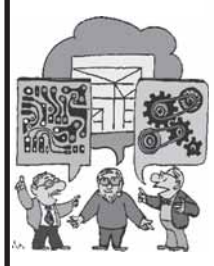
Class of Membership	Amount in Rs. (Excluding VAT)
Fellow	5000
Member	4000
Associate Member	3000
Affiliate Member	2500
Associate	2500
Companion	2500
Student Member < 35	1000
Student Member > 35	2500

International Professional Engineer (IntPEng) Subscription Fees excluding VAT- Rs 2,500/=

Discounts

1. In respect of membership subscription fees, a discount of 25% will apply to members other than Student Members who are above 60 years of age and who declare that their annual income is less than Rs. 600,000/=.
2. A discount of 10% on all annual subscription fees (including IntPEng) for the year 2012 will apply if paid in full on or before January 31, 2012.

THE LIGHTER SIDE OF OUR PROFESSION



Nothing Engineering about it!

End of troubles!

by Dewmini Gamlath
Student Member
Faculty of Engineering, University of Moratuwa

This story was related by one of the senior professors in our university.

Some time back, the professor was conducting a lecture for postgraduates on a Saturday. There was one engineer in the class who was frequently falling asleep and disturbing the class by snoring. The professor went to him and asked what the matter was. The engineer replied with a sympathetic story.

Accordingly, he was working in Trincomalee at that time. On Friday nights, he would return to Kandy where he lived. Early Saturday morning, he had to come for the PG lecture. Again, he had to leave for his workplace on Sunday evening. To add to all of this, he was a newly-wedded engineer...!

The professor, being the kind-hearted man he is, understood the situation and told the engineer not to worry. He asked him to come to the lecture and sleep peacefully in a corner of the class. The professor assured that he would give him all the necessary notes after the lecture. He even asked the engineer to come to his residence, should the need for any clarification arise. The engineer took the advice gratefully.

A couple of months later, the young engineer came to the class in a very delightful mood. He had brought a big parcel and started distributing various kinds of sweetmeats to the professor and the colleagues. The professor who now got curious asked the engineer whether he got a transfer or something. The ecstatic engineer replied;

"No sir, my wife is pregnant...!"

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Ceremonial Inauguration of 105th Annual Sessions of the IESL

make valuable inputs and suggestions on many issues including engineer's involvement in national policy making and implementation of national projects. He thanked everyone for being instrumental in all the achievements of the IESL and wished the incoming President, Eng. (Dr.) Ananda Ranasinghe, the new Council, the new Committees, the IESL Secretariat and all members every success.

The full text of Prof. A K W Jayawardane's speech will be carried in the next issue of SLEN.

The Guest of Honour, Hon Patali Champika Ranawaka, Minister of Power and Energy, in his speech, after commending the IESL for its achievements since its inception in 1906, spoke about the challenges faced today in electricity generation, climate etc. He detailed about the demographically, economically and strategically important location of Sri Lanka in the Indian Ocean. He said that world after being firstly Eurocentric then North-Americacentric is now Asiacentric and that the Indian Ocean is expected to become the gateway for emerging economic giants like China and India. Thus the future prospects for the region and that of Sri Lanka due to its strategic location are brighter and engineering should seize the opportunity he concluded.

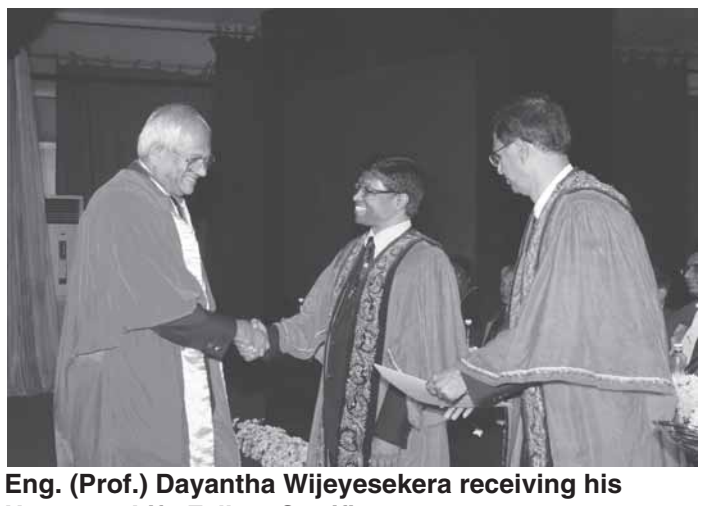
The Keynote Speaker in his address stressed the importance of outcome based approach to modern engineering education. The education system should be able to produce professionals who could fulfill the needs of the industry and the country as a whole he said.

The Chief Guest Prof.G.L.Peries, after conveying the warm felicitations of His Excellency the President, the patron of the IESL, on whose behalf he was attending this event said that Prof. Jayawardane righty described engineering as a nation building profession. He said that the government is currently making tremendous investments on infrastructure development and that engineers must seize the opportunity of making their contribution in rebuilding their country shattered by war. Reaffirming the statement by Prof. Robin King that outcome based education should be the goal instead of the prevailing input focused system he said there is a need for pragmatism to make the shift to a more practical and identifiable demand based education. He said our engineers have excelled in other countries and commended the endeavors of the IESL to reach out to the industry through the Industry forum and to the public at large through the "Building Clinic" and Regional Centers. This was followed by the Presentation of awards for the winners of Junior Inventor of the Year 2011 competition, the Undergraduate Inventor of the Year competition, Honorary Life Memberships and induction of fellows as new members.

Special Invitees standing up for National Anthem

The Chief Guest Hon. Prof. G.L. Peiris addressing the audience

Guest of Honour, Hon. Champika Ranawaka addressing the audience



Eng. (Prof.) Dayantha Wijeyesekera receiving his Honorary Life Fellow Certificate

An award winner receiving her award from the Guest of Honour

The outgoing President adorning the incoming President with "Chain of Office"

The induction of the President for the Session 2011 / 2012 was done thereafter with the adorning of the Chain of Office on the President by the Outgoing President. President for the new session, Eng. (Dr.) Ananda Ranasinghe in his address thanked the members of the IESL for bestowing upon him the opportunity to serve as President of the Institution for 2011/2012 sessions. He said that, as famously stated by Sir. Isaac Newton we are indeed standing on the shoulders of giants, referring to engineer greats who had headed the Institution in the past. He said that although many changes have happened over the years the fundamental concepts of the profession of engineering remains the same. He pointed out the vast advances made in Science, Engineering and Communication and said change is not made without inconvenience and engineers must have the courage to take the full advantage of the veering winds of change. He stressed the importance of participation in the institutions activities and invited the unity and cooperation of all members to fulfil the goals of the institution. ***(See full text of President's speech in page 1...)***

The presentation of Mementoes to the Chief Guest, Guest of Honour and the Keynote Speaker took place thereafter. This was followed by Eng. Tilak Silva, President - Elect delivering the Vote of Thanks bringing the inauguration ceremony to an end.

As part of the activities of the Annual Sessions, the half a day FIESCA Seminar on

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Speakers at the FEISCA Seminar

Sri Lanka Engineering News

The other side(s) of the coin

An article written by Marvin Minsky, a Professor at MIT titled "The Emotion Machine: Common sense thinking and the Future of Human Kind" was forwarded recently to me by a former Editor of IESL to be considered for publication in the SLEN.

The author, in his article comments "We all grow up with the popular view that we have only a single Way to Think – called "logical" or "rational" – but our thinking can be colored, or otherwise influenced by so-called emotional factors."

He goes on to ask the question "Why are we so often satisfied with dividing things into only two kinds? Perhaps this is at least partly, because a typical child's environment contains so few significant "triplets" of things. A two-year old child has only *two* feet, and is taught by a *pair* of parents to learn to put on a *pair* of shoes –Why don't we have words for *trichotomies* or *trifferences*? "

As commented by the Professor, at times, we can be blinded by long established beliefs of the society and as a result may fail to see not only "the" other side but also the many other sides that are available.

Our Engineering forefathers built large reservoirs and waterways and as a result, the village tank and irrigated agriculture together became an integral part of our system. Influenced possibly by our hydrological heritage, we tend to think that trans-basin diversion is the best option left to cultivate the dry zone. Even though our agro ecological classification places all areas having an annual average rainfall of less than 1750mm in the dry zone, by international standards, our dry zone is by no means dry. Thus, the use of pumped ground water for agriculture like what Indian and Australian farmers do and watering only the plants (and not the soil) using techniques such as drip irrigation and resorting to the use of less water intensive paddy cultivation methods could be an option worthy of considering as an alternative to the multi billion rupee NCP canal project.

I ones wrote in one of my previous editorials how an environmental activist boasted about his Eco friendly home that used less timber and lot of concrete even for furniture. Trapped in the age old slogan to save trees, he had failed to see that wooden furniture actually is more environmentally sustainable as we can grow them back unlike raw materials that go in to making concrete. However, his vision could have been blocked by well-established beliefs.

Several decades back, when plastics were first introduced, it was considered as a product that could save the environment by replacing paper and wooden products of the day. It was thought that non-degradable plastics could conserve the vanishing earth resources because of their long life. Now we yearn for plastics that have exactly the opposite characteristic, degradability.

In our quest to achieve an objective, our ability to see all sides of it could be masked by established beliefs unless we encourage "out of the box" thinking or paradigm shifts altogether.

Lakshitha Weerasinghe, Editor
lakshitha@ieee.org

Letters to the Editor

Driving in Super-Highways – Some Useful Tips for Road Safety

by Eng (Prof) M T R Jayasinghe,
Senior Professor, Department of Civil Engineering,
Univeristy of Moratuwa

The Editorial of SLEN of July, 2011 gave some useful thoughts about the usage of super highways. With the opening of Southern Highway and also Colombo-Katunayake and Outer – Circular roads being constructed at a rapid phase, while preparations are also underway for a highway up to Ambepussa and subsequently up to Kandy, we will see a significant change in our mobility within Sri Lanka. For example, we are expected to improve our average speed of travel on our main highways from 50 km per hour to about 100 km per hour without compromising the road safety and sometimes improving the road safety. With the opening of Southern Highway, reaching Galle in one hour and ten minutes from Makumbura (Kottawa) to Pinnaduwa (Galle), a distance of 104 km (96 km on the super-highway) in about one hour would be possible. This is because the vehicles on the super-highway are expected to be driven at 100 km per hour speed; this could be considered as the generally expected minimum speed while it being the recommended maximum. This means that it is the responsibility of all the road users to facilitate this by driving at about 100 km per hour by following the recommended desirable practices. However, the absolute minimum recommended would be 60 km per hour below which the motorists could be charged for an offence.

Since I had the opportunity to get first hand experience driving in high speed roads of United Kingdom (as a post graduate student) and in Australia (when I spend my sabbatical leave) and also as a person who has traveled in high speed roads of USA, Sweaden, Denmark, Singapore, India, etc., I thought it would be reasonable to share some of my experiences with the readers of Sri Lanka Engineering News. There are few reasons that encouraged me to write this article since some of my own colleagues expressed the fear of using the Southern Highway as soon as it is opened to traffic considering some not so desirable behaviours of majority of the Sri Lankan driving license holders (we drive with a lot of common sense rather than following the road rules very well; a practice that can work reasonably well when the speeds are low). I also wish to thank the Editor of SLEN who encouraged me to write this article.

There are few important points that can be followed by any driver of a high speed road. They are first given in point form and then elaborated later:

1. The condition of your vehicle
2. Joining the super-highway
3. The driver comfort
4. Changing lanes in the super-highways
5. Overtaking in super-highways
6. Braking and changes in traffic conditions
7. Leaving the super-highway
8. Night time driving

1. The condition of your vehicle

In super-highways, the vehicles are driven at about 100 km per hour for about one hour or more. As the driving on any road, vehicle has to be well maintained. One of the key features is the need to have good tyres. In this context, it is very important to have tubeless tyres fitted to the vehicle if such tyres have been recommended by the vehicle manufacture. One of the key advantages of tubeless tyres is their ability to resist punctures while maintaining a reasonable tyre pressure. When tubes are used, a tyre can be flat in few seconds while a tubeless tyre could allow a safe passage until the next exit from the super-highway. This is of particular importance for the vehicles owned by government organizations where the strict government procurement procedures may not allow the fitting of good quality tubeless tyres unless specifically indicated as a need for safe driving, especially if such vehicles are expected to use the super-highways.

The owners of private vehicles also must ensure that at least the front wheels are fitted with good quality tyres avoiding re-build tyres as much as possible; even the best quality re-build tyres are not recommended if the speed of the vehicle could exceed 140 km per hour. If the quality of the re-build tyre is not very good, the maximum allowable speed could be much less.

It is also necessary to have the tyres balanced and aligned to avoid wobbling at high speeds. This also would need good quality tyres preferably being radial type manufactured by a reputed manufacturer with many years of experience for manufacturing tyres for high speed roads. This is especially valid for cars, vans, double cabs, etc., where the manufactures always recommend radial tyres fitted as tubeless.

It is also necessary to ensure that the vehicle has adequate pulling power and also a recommended maximum speed well over 100 km per hour. Any vehicle driven at a lower speed such as 70 or 80 km per hour could reduce the capacity of the super-highway significantly while drastically affecting the level of service that is offered to the other motorists. Therefore, the driver of each vehicle has to firmly understand their responsibility for the other motorists.

In Sri Lanka, it is common to find drivers who believe that driving at slower speeds can make them very good safe drivers. However, the important fact that they do not understand is that their slower speeds could compel many other motorists to overtake thus causing many unnecessary and dangerous maneuvers. Therefore, those with such misconceptions about safer drivers would have to change their attitudes if they wish to use super-highways.

2. Joining the super-highway

Generally, there will be a toll gate at the entrance to the super-highway. After that, there will be slip road which leads into an acceleration

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Letters to the Editor

Road Accidents – A Pre Preventive Attempt

by Eng. S.D S .Deshapriya
MM&C Division, Road Development Authority

(An approach out of the frame)

(Open for discussion)

Road Accidents have increased in Sri Lanka and the annual figure is higher than the average of deaths occurred during the past period of terrorism. Now this has become the new terrorism after defeating the former one. Though actions are being taken to reduce this figure and to minimize the situation, its incremental trend is now questioning the effectiveness of such action taken so far.

There is no doubt that implementing law with heavy penalties as in other countries would be the effective solution for this situation. Agreeing that the above fact could be the last resort which is found from the subject of law at curative stage , effort is taken here,to find out another alternative as a preventive measure, perhaps the pre-preventive one.

At the beginning the attention is drawn to two aspects.

1) Finding the solution within the subject is sometimes not effective. In such a situation, Solution has to be found, out of the frame. It seems to be true for the accidents as well. This is clear in the light of the many existing traffic rules and guidances and yet finding resort from the subject of law reveals this reality. Any how the imposing of penalty comes under the solutions at curative stage.

2) Some problems are easy to solve once they are arise, at the curative stage. Some are easy to avoid before arising, at the preventive stage rather than by a curative measure. In contrast, some are more easy to prevent hence those are to be addressed at the pre-preventive stage. In this context, difficulty of preventing accidents also show that they are also to be addressed at the pre-preventive stage.

This leads to a pre-preventive solution out of the frame.

In this context, Buddhist techniques could successfully be used for early tackling the problem, since it is the science of arresting the ever changing universe at every instance which in comparison even motor vehicles are not running at such a speed. Hence a minute part of this speedy philosophy would be quite sufficient to arrest the situation and accordingly, 3 major techniques are extracted from the doctrine for this purpose.

(a)Adequate minimal (sufficient)
(b) Arrest at mind level
(c)Mind mapping (Visualizing)

In order to give more weight and the concentration for shorter period of time, these three techniques are combined together to act as a "three in one setup". Hence the significance of this exercise is the deep concentration and attention for the very short period of time, by using this three in one set of techniques.

Even one instant is sufficient for an accident and many fatal accidents have occurred, In the instance of overtaking for about 5-10 seconds of very short period of time.

In this instance one vehicle is at the others lane. Automatically the "instant lane" concept (trajectory ?) is coming to play in order to arrest the situation, since it is a net effect of this philosophy of, about the ever changing nature in every moment. At the time one person (Driver) is violating the second persons lane and the second person is also heading towards without knowing it, hence unprepared as it is his lane. Concept of mind mapping is directly focused to the overtaking person in such a way that through out the overtaking period he visualizes a incoming vehicle nearby, driven by an unprepared person. Hence the over taking person could plan & prepare to accept the incoming vehicle safely which is driven by a unprepared person and guarantee him the sufficient space to drive comfortably. As said Earlier, Significance of this exercise is the deep concentration and attention by a overtaking driver towards the incoming vehicle for a very short period of time of overtaking. Finally the" instant lane" concept become practical and more effective for the safe overtaking. (The concentration and relaxation is a trainable property of mind quite similar to the contraction and expansion property of the material)

In order to avoid accidents, mind mapping three in one technique is applied through out the critical time of over taking, of which further relates to the meditation. These three techniques are further elaborated here for their applicability.

(a) Art of driving carrying as guidance and rules, is compiled in books. When facing a critical moment while driving at a speed ,driver can not recall all these rules and select the appropriate one for this moment. It is not practical at all ,within a very short period of time. When a critical situation is arised as such, Buddhism comes up with the answer of "adequate minimal or sufficient concept", as explained in Chullapanthaka Character .When a mank called Chullapanthaka was about to unrobe, saying the difficulty in following so many disciplines,Load Buddha solved it instantly with an adequate minimal (Sufficient)answer. There in the millions of disciplines were summarized to an one moment of mithree in such a way by the Load Buddha saying the ability to meditate mithree for one instant is quite adequate and hence qualified for carrying the robe.

The technique of summarizing mass to the minimum sufficient level (of one discipline) is very important ,as a concept ,to tackle critical situations while driving.

In this Context, Code of discipline of drivers is coming under the preventive category. Selecting one discipline out of many, would promote it as a speedy technique ,lying within the preventive category .

Preventive
⟶ Pre-Preventive

(a) Further, Buddhism shows that the most effective and easy way of tackling the problem is at the mind level rather than at the society or operation level, which requires lot of effort. With the strategy of arresting at mind level ,driving exercise enters into the pre preventive stage. It would advance the driving undoubtly.

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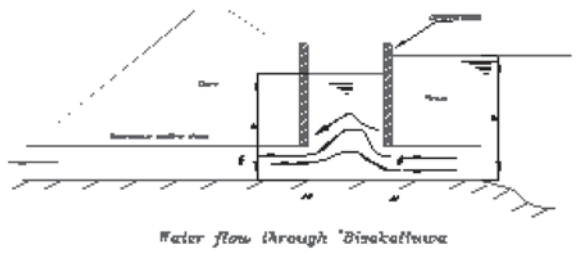
මාගේ බිසෝකොටුවේ කාර්ය භාරය (The main function of Bisokotuwa) නමැති ලිපියට ප්‍රතිචාර දක්වන ඉංජිනේරු සරත් චන්ද්‍රසිරි මහතා ජලයේ ස්පර්ශීය බල /ආතති (shear stress) නැතිබව දක්වා ඇත. ජලයේ ස්පර්ශීය බල නොමැති නම් එනම් ජලයේ දුස්ස්‍රාවීතාවක් නොමැති නම් (Non viscous) තිරස් ජල නල දිගේ පීඩන බැස්මකින් තොරව ජලය ගෙන යාහැකි විය යුතුය. සරත් චන්ද්‍රසිරි මහතා අවම වශයෙන් ඒ ගැනවත් සිතා බැලිය යුතුය.

තවද බිසෝකොටුවට ඇතුළුවන ජලය 'expand' වේ යන්නෙන් මාගේ ලිපියේ සඳහන් වන දෙයින් අදහස් කෙරෙන්නේ ජලයේ පරිමා ප්‍රසාරණයන් පිළිබඳව නොවේ.

එහිදී ජලය කුඩා ප්‍රදේශයක සිට විශාල ප්‍රදේශයකට ඇතුළු වන බවය. මෙහිදී ජලයේ යම් සුළු පරිමා සංකෝචනයන් විය හැක. මන්ද එහි පීඩනය වැඩිවන නිසාය. එහෙත් බිසෝකොටුවේ කාර්යභාරයට එය එතරම් වැදගත් නැත. බිසෝකොටුවේ කාර්ය භාරයට වැදගත් වන්නේ වැවේ ඇති ජලය බිසෝකොටුව තුළ ජල ස්කන්ධයට ඇතුළු විමේදී ඒ තුළ විසිර යාම නිසා ඇතිවන ස්පර්ශීය බල /ආතති (shear stress) නිසා එහි වේගය/ පීඩනය බාල කෙරුමය.

බිසෝකොටුව තුළ ජල කඳේ උස වැවේ ජල කඳේ උසට වඩා අඩුවන්නේ මේ නිසාය. මේ පිළිබඳ ගණිතමය විග්‍රහය පහත පරිදි වේ.



Water flow through Bisokotuwa

ඇතුළු වන සොරොව්වේ වර්ග ඵලය = A_1

පිටවන සොරොව්වේ වර්ගඵලය =A_2

ජලය ගලන පරිමා සීඝ්‍රතාව =$\dot{e}$

ජල කඳේ උස =H

බිසෝකොටුව තුළ ජල කඳේ උස=h

ඇතුළු වන විවරයේ ඒකක ජල බරක ශක්ති හානි සංගුණනය=k_1

පිටවන විවිරයේ ඒකක ජල බරක ශක්ති හානි සංගුණනය = k_2

ඇතුළු වන සොරොව්වේ ශක්ති හානි සංගුණකය =k_3

පිටවන සොරොව්වේ ශක්ති හානි සංගුණකය=k_4

$$H - h = K_3\left(\frac{\dot{Q}}{A_1}\right)^2 + K_1\left(\frac{\dot{Q}}{A_1}\right)^2 \rightarrow (1)$$

$$h = K_2\left(\frac{\dot{Q}}{A_2}\right)^2 + K_4\left(\frac{\dot{Q}}{A_2}\right)^2 \rightarrow (2)$$

1 සහ 2 මගින් h සහ Q නිර්ණය කළ හැක. මේ අනුව H ට වඩා h අඩු වන අයුරු පැහැදිලිය.

මේ පිළිබඳ තව දුරටත් වඩාත් නිවැරදි විශ්ලේශණයන් අවශ්‍ය නම් 'Navier Stoke' සමීකරණය සහ F.E.M. ක්‍රම යොදාගෙන එය කළ හැක. එසේ කළහොත් බිසෝකොටුවේ කාර්යභාරය තවත් හොඳින් පැහැදිලි කරගත හැක.

මේ කිසිවක් නොසලකා බිසෝකොටුව විදුලි පරිපථයකට සම කෙරුමට යාම විහිළුවකි. ප්‍රථමයෙන් කළ යුත්තේ බිසෝකොටුවට අදාළ ජල විද්‍යාත්මක සමීකරණ ගොඩනැගීමය. අනතුරුව එම සමීකරණ වලට සාම්‍ය සමීකරණ ඇති විදුලි පරිපථයන් නිර්මාණය කළ හැකි නම් පමණක් එම විදුලි පරිපථයේ ක්‍රියාකාරිත්වය අනුව බිසෝකොටුවේ ක්‍රියාකාරිත්වය විවරණය කළ හැක.

Puzzle - 44

The Pirate Problem

The following Puzzle was contributed by Student Member Dewmini Gamlath (S-10843), Mechanical Engineering Undergraduate of the Faculty of Engineering, University of Moratuwa, Sri Lanka. It is an excellent Puzzle in logic and I recommend the readers of the Puzzle Corner to give it a try and enjoy the effort. It also brings back fond as well as painful memories (he broke my arm) of my old friend **Pottacharlie the Pirate** whose remains lie at the bottom of the ocean within the confines of the sunken VLCC (Very Large Crude Carrier) - Baba Gir Gir. Dewmini has promised to keep on sending many more puzzles of this type and I welcome him to do just that.

A gang of five pirates has found a treasure of 100 Doubloons (gold coins). According to pirate tradition, the senior-most pirate has to propose a method to divide the treasure among the gang members. Then, each pirate has to vote either for or against the method. If the method wins simple majority, it is accepted. Otherwise, the pirate who proposed it will be killed and the pirate next in seniority is asked to propose a method. This goes on until one method is accepted. A tie of votes is taken as an acceptance.

What is the best method that can be proposed by the senior-most pirate, that saves his life as well as gives him the maximum share of the treasure? You should consider that all five pirates are extremely intelligent (this fact is very important in solving the problem).

Contributed by Puzzle Enthusiast
Dewmini Gamlath

Solution for Puzzle No. 39

Devarak Chakkare

The winner this time is Eng Chamira Wickramarachchi (AMIE 8633) as she was the youngest to have sent in the correct solution. The others who sent in correct solutions are, Engnrs. Name: L.C.A. Pushpakumara (M 4205), Name: M.A.C.A.D. Mataraarachchi (AM-6883) and Name : J.M.S. Wickramasinghe (M 5507).

The winning solution is given below:

```
                                7  8  5  7  0  1x
                                3  6  4  9  0  2
                             ------------------
                             1  5  7  1  4  0  2
                             0  0  0  0  0  0
                          1  5  7  1  4  0  2
                          1  5  7  1  4  0  2
                          1  5  7  1  4  0  2
                          1  5  7  1  4  0  2
                             7  8  5  7  0  1
                       1  5  7  1  4  0  2
                       1  5  7  1  4  0  2
                    1  5  7  1  4  0  2
                    1  5  7  1  4  0  2
                    1  5  7  1  4  0  2
                 1  5  7  1  4  0  2
                    7  8  5  7  0  1
              ------------------------
              2  8  6  7  0  3  8  6  6  3  0  2
```

The methodology is explained in her own words as follows:
It's very easy to explain. I invented this when I was in Primary school, because I was too lazy to remember the ' Chakkare'. I was punished by my teacher several times for giving wrong answers on the 'chakkare', though I was good in other ways.

You can do this without knowing even 'dewarak chakkare' but the problem is that you need a bigger sheet for adding a long column. But it works well for multiplying small numbers.

For this puzzle:
1st digit: Multiplying by 2 is not a problem
2nd digit: Multiplying by 0 is always zero.
3rd digit: Multiplying by 9 = Adding the number 9 times
OR [adding the (number) x2 four times + (number)] . You have to do this for all the 6 digits. Very easy!

Eng Chamira Wickramarachchi

Faster Than Light Neutrinos

By Eng Sarath Chandrasiri

The Gran Saso finding that neutrinos travel faster than light has aroused a veritable hornet's nest within the international scientific community. Einstein is held in such high reverence by them that they would not accept anything that proves him wrong without putting up a big fight. The first argument brought against the new discovery is the knee jerk reaction that the measurements were wrong. Gran Saso measurements show that the neutrinos were arriving 60 nanoseconds earlier than expected. The opposition attributes this observation to the margin of error in the time measurement, which is vehemently denied by the supporters of Gran Saso. Oh, how I wish we had a Neutrino Detection Facility in Sri Lanka! We could have had the last say on the controversy.

In the meantime others have opted for the option of accepting the results and at the same time saving Einstein's Theory in a typically proverbial case of 'Ravulath Oney Kendath Oney' (I need the beard as well as the rice soup). I am describing some of them below.

4th Dimension: One theory is that the neutrinos take a 4-Dimensional short cut from CERN to Gran Saso, while light (photons) take the conventional 3- Dimensional path. In other words, neutrinos make the journey faster because they take a short cut and not because they travel faster. They almost sound as if they are blaming the neutrinos for doing something that is simply 'not done' – like not sticking to the official path in a marathon.

My analogy for this is a 2-D surface such as that of a sphere. Photons travel from A to B (say, two diametrically opposite points on the sphere), along the surface of the

Contd. on page 14...

TECHNO 2011

The national engineering and technology exhibition, Techno 2011, the flagship event of the IESL was conducted successfully for the 26th consecutive year on 7th, 8th and 9th October 2011. It was declared open by Hon. Wimal Weerawansa, Minister of Construction, Engineering Services, Housing and Common Amenities on 7th Friday October 2011 at Sirimavo Bandaranaike Memorial Exhibition Center at the BMICH.

This year too more than 250 stallholders representing the entire spectrum of engineering related industries took the opportunity to make use of the exhibition as a platform to showcase their products and services incorporating the latest of global technologies.

The 'Building Clinic',a concept of the Civil Engineering Sectional Committee of the IESL which made its debut the previous year at the Techno 2010 provided professional advices from practicing engineers for house owners seeking solutions to house-building and maintenance problems free of charge. Special seminars too were arranged to create general awareness on cost effective ways of house-building and maintenance for the visitors to the exhibition.

The exhibition also had special features like Robot Competition, Computer Games Development Competition (Cruncher) together with exhibits of the winners of the Undergraduate Inventor of the Year and Junior inventor of the Year 2011 competitions.

Special projects of the IESL which reach out to the masses in the provinces too found expressions through exhibits in the stalls of the IESL Provincial Centres.

The selection of the best stalls for the gold, silver and Bronze awards of various categories were done as in the previous years and the presentation of those awards together with awards for the winners of the above mentioned competitions were done at a glittering ceremony filled with entertainment, the Techno Awards Ceremony, held at the Hotel Galadari on 28th Oct. 2011. Mr. S.M Gotabe Jayaratne, Secretary, Ministry of Construction, Engineering Services, Housing and Common Amenities graced this event as the Chief Guest.

Eng. (Dr.) Ananda Ranasinghe, President – Elect & Chairman Techno – Addressing the gathering at Techno – 2011, (BMICH)

Hon. Wimal Weerawansa, Minister of Construction, Engineering Services, Housing & Common Amenities, addressing the gathering, as the Chief Guest at Techno 2011 inauguration

Chief Guest and the special invitees at the Techno 2011 – Inauguration (BMICH)

Hon. Wimal Weerawansa launching the Engineering jobs.lk, website created by Young Members' Section of IESL

The Stall with Highest Technological Impact – Gold Award Mr. Mangala Yapa, Chairman, Dockyard General Engineering Services (Pvt) Ltd. receiving the award on behalf of the company at the Techno awards ceremony

The stall with Best Display – Gold Award, Mr. Vikas Saxena, Country Manager Siemens Ltd. receiving the award on behalf of the company at the Techno awards ceremony

Enhancing The Nation's Engineering Prowess

Engineering Excellence Awards 2011

Excellence in professions among citizens has been the hallmark of countries that achieved progress and status par excellence in specialty fields. Some of the most innovative solutions to challenges faced by mankind had been a result of the quest for excellence in professions by men and women of great vision, patience and perseverance.

Sri Lanka in particular has a great engineering tradition with its ancient kings engaging in building of irrigation tanks, stupas, dagabas, fortresses, gardens, etc., that considered the best interest of the society and based on engineering principles which are being validated as sound to this day. Latter-day engineers of Sri Lanka like Prof. E.O.E. Pereira, Eng D.J. Wimalasurendra, Vidya Jyothi (Eng) (Dr) A.N.S. Kulasinghe, Eng. B.D. Rampala and others had carried on the great tradition and have established par excellence status to the profession.

The Institution of Engineers, Sri Lanka (IESL), being the premier professional body for engineers in Sri Lanka is committed towards uplifting the status and interest of the engineering profession in the country. The biennial Engineering Excellence Awards are presented by the IESL to encourage and celebrate this excellence in the science and the practice of engineering by rewarding the best and the finest of its members, individuals, organizations and companies in Sri Lanka for their outstanding accomplishments and achievements related to engineering.

The Engineering Awards were first presented in the year 2006, but without a ceremony, to honour the following with Excellence in Engineering Awards :

- Eng. (Prof.) K K Y W Perera
- Eng. (Prof.) D S Wijeyesekera

The first ever formal awards presentation ceremony was held in the year 2008 at which the following were honoured with Eminence in Engineering Awards:

- Deshamanya Eng. (Dr.) Ray Wijewardena – Eminence in Engineering
- Eng. M Chandrasena – Eminence in Engineering

At the same ceremony Eng. Priyal De Silva and Eng. (Prof.) B L Tennekoon were presented with Excellence in Engineering Awards.

This year the Engineering Excellence Awards ceremony was held at the pictureque Waters Edge on 5th October 2011 with Mr. Ajith Nivard Cabraal, Governor of Central Bank of Sri Lanka as the Chief Guest

The winners of the Engineering Excellence Awards 2011 as announced at the Awards Presentation Ceremony held on October 5, 2011 at the Waters Edge are given below.

The Chief Guest Mr. Ajith Nivard Cabraal being conducted in procession for the Engineering Excellence Award 2011 ceremony

EMINENCE IN ENGINEERING AWARDS FOR INDIVIDUALS

- Eng. (Prof) S Karunaratna
- Eng.(Dr.) Mervyn Gunasekera

EXCELLENCE IN ENGINEERING AWARDS FOR INDIVIDUALS

- Eng. (Prof) W P S Dias
- Eng. Jayantha Ranatunga
- Eng.(Dr.) Sarath Abayawardana

EXCELLENCE IN ENGINEERING AWARDS FOR ORGANIZATIONS

- Colombo Dockyards PLC -Infrastructure-Construction
- Mobitel (Pvt) Ltd. -Infrastructure-Services
- Sierra Cables PLC -Manufacturing-Large

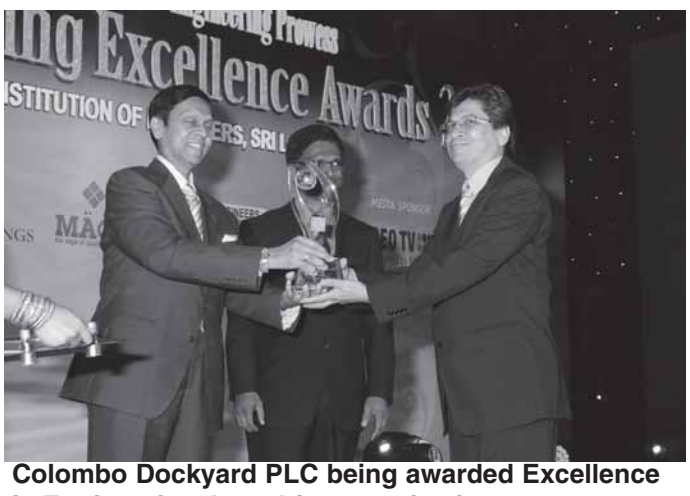
CHARTERED ENGINEER AWARDS

- Eng. (Prof.) M T R Jayasinghe -Civil Engineering
- Eng. N R Jayasinghe - Electrical and Electronic Engineering
- Eng. R G Rubasinghe -IT and Communication

Eng. (Ms.) Arundathi Wimalasuriya, Executive Secretary, IESL, lighting the oil lamp

Prof. Ananda Jayawardane, President of IESL making the welcome address

Eng. (Prof.) W P S Dias receiving Excellence in Engineering Award from the President - Elect, IESL Eng. (Dr.) Ananda Ranasinghe



Colombo Dockyard PLC being awarded Excellence in Engineering Award for organisation

THE INSTITUTION OF ENGINEERS, SRI LANKA

ENG. B D RAMPALA MEMORIAL LECTURE

on

'An Engineering Perspective of the past, present and future of the Railways'

By

Eng. Prof. Amal Kumarage

Senior Professor of Civil Engineering, Department of Transport & Logistics Management, University of Moratuwa.

TUESDAY – DECEMBER 20, 2011

AT

IESL WIMALASURENDRA AUDITORIUM

ALL ARE WELCOME

The Institution of Engineers, Sri Lanka
and
Ray Wijewardene Charitable Trust
invite you to the

Inaugural Ray Wijewardene Memorial Lecture

Grassroots Innovation for Inclusive Development: From Rhetoric to Reality

by **Dr Anil Kumar Gupta**

Professor, Indian Institute of Management, Ahmedabad
Executive Vice Chair, National Innovation Foundation of India
Member, National Innovation Council, India
Founder, Honey Bee Network

5.15 pm, 13 December 2011
at IESL Wimalasurendra Auditorium, 120/15 Wijerama Mawatha, Colombo 7.

Brief profile: Anil Gupta is an unusual professor who walks the talk — and walks through the villages and slums in search of innovation. He wants to ensure that grassroots innovators receive due recognition, respect and reward for their bright ideas. He also seeks to embed innovative ethic in educational policy and institutions.

Gupta founded the Honey Bee Network in 1986-87 to promote a fair and responsible knowledge ecosystem, where innovators can benefit by sharing their ideas. In the 1990s, he set up the Society for Research and Initiatives for Sustainable Technologies and Institutions (SRISTI, www.sristi.org) and Grassroots Innovation Augmentation Network (GIAN, www.gian.org) both of which support the Honey Bee Network to scale up and convert grassroots innovations into viable products. All three are partners of the National Innovation Foundation (NIF India, www.nif.org.in), an autonomous body under the Department of Science and Technology (India), which since 2000 has mobilized more than 160,000 innovations and traditional knowledge practices from all over India. It now holds the largest database of its kind in the world.

Professor Gupta has received a large number of awards and honours, including Padma Shri from the President of India (2004), Science-in-Society Award from the Indian Science Congress Association (2004) and the Asian Innovation Award Gold by the Far Eastern Economic Review (2000). Detailed profile at: www.iimahd.ernet.in/~anilg/

Admission is free on a first-come, first-served basis.

Health Insurance Scheme for IESL Members

A MOU was signed between the IESL and the National Insurance Trust Fund (NITF) whereby the latter would provide comprehensive health insurance coverage for the members of the IESL.

Prof. Ananda Jayawardane, President of IESL 2010/2011 sessions and Mr. Senaka D Abeygunasekera, Chairman NITF signed the MOU for the two parties at a simple ceremony held at the Wimalasurendra Auditorium of the IESL on 12th October 2011.

Main Features of the Scheme:

- This is a group policy and will commence on 15-Nov-2011.
- Members upto 85 years are eligible
- Sum insured ranges from Rs. 150,000/= upto Rs. 1,000,000 (6 options are available)
- Join in without undergoing any medical test
- Additional covers for 25 critical illnesses, personal accidents, eye care, child births etc., for no additional premium
- Spouse and the children also covered but no added premium
- Hassle free hospitalization and bill settlement system

Detailed information could be obtained from the Finance Department of the IESL

THE INSTITUTION OF ENGINEERS, SRI LANKA

One day Course on "PROCUREMENT MANAGEMENT"

Continuing Professional Development Programme of the IESL

Target Group	Senior and Middle level Engineers and Officers in Engineering allied Fields.
Participants	Maximum of 30 Participants
Course Modules	❖ Introduction to Public Procurement ❖ Procurement Process ❖ Procurement Planning
Resource Person	**Mr. Ivan Tissera**
Date & Time	**December 17, 2011 from 0900 hrs to 1630 hrs**
Venue	**IESL Members Lounge**
Course Fee	**Rs.4,500/- for Members of the IESL and Rs.5,000/- for non-members.**
Registration	Admissions are limited and will be filled strictly on first come, first served and paid up in full basis. Applications can be obtained from the Education and Training Division
Further details	**Education, Examinations & Training Division** **Tel. 011 2 698426** **Fax : 011 2 699202** **E-mail : deetiesl@sltnet.lk**

DIRECTOR – EE&T
The Institution of Engineers, Sri Lanka
120/15, Wijerama Mawatha, Colombo 7.

Photographs of the Deshabandu Vidya Jyothi Eng (Dr) A N S Kulasinghe Memorial Lecture

Eng. (Dr.) Ananda Ranasinghe, President - IESL garlanding the photograph of the Deshabandu Vidya Jyothi Eng (Dr) A N S Kulasinghe

The lecturer Vidya Jyothi Eng. A D S Gunawardana (Former Secretary - Ministry of Irrigation & Water Management) delivering his lecture

Eng. (Dr.) Ananda Ranasinghe addressing the gathering

The audience, including the Deshabandu Vidya Jyothi Eng (Dr) A N S Kulasinghe's family members

IESL 'Building Clinic' comes to Panagoda

A Building Clinic where engineering experts were at hand to provide immediate answers to problems encountered by ordinary people while building a house of their own was conducted at Shri Bodhirajarama premises at Panagoda, for the benefit of residents in and around the Bodhiraja Temple vicinity on Saturday , 01st Oct 2011. It was organized by the Civil Engineering Sectional Committee of the Institution of Engineers, Sri Lanka (IESL) in close collaboration with the National Housing Development Authority (NHDA) as part of the World Habitat Day Commemorations programme of the Ministry of Construction, Engineering Services, Housing and Common Amenities. The Secretary to the Minister, Mr. S M Gotabe Jayaratne graced the occasion as the chief guest. The General Manager - Major General W R Wasantha Kumara, Deputy General Manager (Engineering Services) - Eng(Ms) Srimathi Weerasinghe and Eng(Ms) Renuka were among those representing the NHDA at this event. The District Manager; Eng Gunapala and the staff of his office also were present.

Chief Guest, Mr. S M Rajapaksha addressing the audience

Civil Engineering Sectional Committee Chairman addressing the audience

The inauguration ceremonies began with the arrival of the Chief Guest at around 9.30 a.m. followed by the lighting of the traditional oil lamp and the recital of national anthem. The Chairman of the Civil Engineering Sectional Committee, Eng(Major) Nishsanka Wasalabandara in his welcome address thanked Mr. Jayaratne for his fullest assistance extended to the spread and realization of the goals of the Building Clinic and commendable role of the NHDA in organizing this clinic despite the short time available to do so He also thanked the Panagoda Pradeshiya Sabha for their efforts to create awareness among area residents despite the short notice. He appreciated the services of the experts and welcomed all. While explaining the objective of the Building Clinic, he pointed out the unavailability of the services of Engineers for construction of houses in general while more than 1,000 Graduate Engineers are being produced through the free education in Sri Lanka every year. He said "the involvement of an Engineer would reduce the cost for construction and also ensures a safe sustainable house without issues like water leaks through concrete slabs, cracks in beams, walls etc. He informed that the Building Clinic concept, launched for the first time at the Techno 2010 Exhibition of the IESL, has proved to be a very popular and much appreciated service among ordinary people recording more than 200 consultations in the 3 days it was held at that exhibition. He further said that the ministry has responded enthusiastically to the potential public services the Building Clinic could offer and are promoting the concept to be made part of the Janasevana programme and possibly adding it to the next Deyata Kirula exhibition.

Members of the public getting professional advice from engineers at the Building Clinic

The Chief Guest, Gotabaya Jayaratne in his address informed that this clinic is one of many functions his ministry is involved in to mark the World Habitat Day and that his presence here shows the importance the ministry attaches to the concept of Building Clinics. The fact that it interacts with ordinary people to find low cost solutions to their building problems contributes to peace and harmony to those families he said reiterating his backing to the concept.

The General Manager, NHDA, Major General Wasantha Kumara in his

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Panel Discussion on Comprehensive Economic Partnership Agreement (CEPA) between Sri Lanka and India

A Panel Discussion on the Comprehensive Economic Partnership Agreement (CEPA) between Sri Lanka and India was held at the Wimalasurendra Auditorium of the Institution of Engineers Sri Lanka on 17th October 2011, from 4.30pm onwards. It was organized by the IESL under the prevailing circumstances where many local businesses and professionals have voiced their opposition to it.

A panel of eminent personalities who are familiar with the terms and conditions of the CEPA participated in the discussions in the presence of a well attended and somewhat vociferous audience.

Prof. Ananda Jayawardane, President of IESL, explaining the purpose of convening the panel discussion described CEPA as very important and controversial, the merits or demerits of which could be far reaching in view of its vast scope. That the agreement is going to be a framework agreement with the possibility of later annexes with undesirable features and that even the framework agreement is not available for study has led to the controversy and concern he said. The IESL is also very much concerned about the agreement specially about the professional services aspect.

Eng. (Dr.) Brig. Ananda Ranasinghe, President Elect of IESL, then laid down the rules for conducting the panel discussion and invited panel members to the podium for presentation of their positions as regards CEPA within their prescribed time of 15minutes each. The presentations session were to be followed by a Question and Answer session.

Among the total six panel members who addressed the audience the ratio between proponents and opponents of the CEPA were evenly split. Mr. G.T Senadhira - Director General, Department of Commerce, Mr.Rohan Samarajeewa - Chairman and CEO, LIRNEasia and Dr. Harsha de Silva – Hon. Member of Parliament spoke in favour of the CEPA while Mr K.D Rajapakse – Chairman, DSI, Mr. Samantha Kumarasinghe – Chairman / Managing Director, Natures Beauty Creations Ltd. and Eng. Lalith Kahatapitiya, Chairman, KIK Group of Companies spoke against the agreement in their presentations.

A Comprehensive article based on the outcome of this Panel Discussion is to be published in a forthcoming issue of SLEN.

Prof. Ananda Jayawardane, President IESL making the welcome address

Eng. (Dr.) Ananda Ranasinghe, President-Elect, IESL, conducting the panel discussion

Mr. G T Senadhira, Director General, Department of Commerce, addressing the audience

Mr. K D Rajapakse, Chairman, DSI, addressing the audience

Dr. Harsha de Silva, Hon. Member of Parliament, addressing the audience

Eng. L Kahatapitiya,Chairman, KIK Group of Companies, addressing the audience

Mr. Rohan Samarajeewa,Chairman and CEO, LIRNEasia, addressing audience

Mr. Samantha Kumarasinghe,Chairman / Managing Director, Natures Beauty Creations Ltd., addressing the audience

COMMUNITY SERVICE BY ELECTRICAL AND ELECTRONICS SECTIONAL COMMITTEE I.E.S.L

by Eng. E W Karunaratne

The Chairman and the committee members of the Electrical and Electronic, sectional committee undertook to carry out a community service project to a school in a remote village. This village school is situated in a remote area about 15km off Puwakpitiya in the Avissawella district. It has four separate halls accommodating the class rooms. One servicing as the main assembly hall. This school has about 80 students and classes up to 'A' Level and almost all the children are from the low income groups. The name of the school is Pagnagula Maha Vidyalaya and the principal is a lady teacher. She mentioned to the committee that they had classes up to 'A' level and some students have even gone to the university from this same school.

The community project undertaken was to carry out the complete wiring to two main halls and repair the wiring of the two balance halls, and also repair the doors and windows of the main assembly hall. The work was undertaken on the bassis that members of the committee will find a sponsor to finance the project. As the committee was unable to find a sponser, the project had got dragged on for nearly one year without an influential member in the committee who could find a sponser. The chairman was not willing to give up the project due to non availability of a sponser as they had given an undertaking to the school. The committee discussed this matter at length and decided to finance the project by the members of the committee. Eng. Kosala Abeysiriwardana also agreed to contribute because he is the main author of the project.

Eng. D G Upasiri had agreed to handle the project and entrusted the work to a contractor and he also supervised the work. Two main halls were completely wired, and the wiring of the other two main halls were repaired. The doors and the windows were fabricated in Panadura. As a result they had to get a permit to transport the timber doors. The work was completed after much persuasion.

The Principal of the school wanted to have a function to hand over the work completed by the sectional committee. The committee agreed with the decision of the Principal and had decided to pay a visit to the school on, 24 September 2011 over for the ceremony. There was balance money Rs. 11,000 left from the upper Kotmale visit and committee decided to buy some books for the school library. Eng. Faisal and Eng. Kolonne bought the required books from the book exhibition. Another member contributed 100 Exercise books to be given to the low income group children.

The work done was formerly handed over to the Principal and also the books to the library. The Principal thanked the I.E.S.L. for making this valuable contribution to the school. The chairman suggested that if the other sectional committee can undertake similar projects it will be of great benefit to similar school in the island. The chairman also undertook to finance a student who can enter to the university from the school. After this small ceremony tea was served with cake for the committee members who joined the visit to the school.

BENEVOLENT FUND

HELP A FELLOW MEMBER IN DISTRESS

This year, the **IESL Benevolent Fund** has so far assisted seven of our members who are facing financial hardships mostly due to ill health. Two members were assisted each with Rs 40,000.00, and five members with Rs 60,000.00 each, after the amount of assistance was increased recently.

The **Benevolent Fund** is maintained with **your own voluntary contributions.** We appeal to you this time to give more generously when you pay subscriptions, by contributing more than the Rs 200.00 standard contribution proposed in the Subscription Notice and make the fund richer to assist more of your own colleagues in need!

Yes, it is a small sum. Yet, when faced with financial hardship, even this small amount will help a lot. For instance, a member suffering from a Brain Tumour who had undergone surgical treatment at a cost of over Rs 5.0 Million, applied for assistance from the **Benevolent Fund,** because even this small sum was important to him in his time of serious need.

Be a **Friend in Need** and contribute generously to the **Benevolent Fund!** Thank You!

BOARD OF MANAGEMENT OF THE BENEVOLENT FUND

Contd. from page 1....

PRESIDENT'S SPEECH....

the early part of the 19th Century, which describes the difficulties of travel and the meanness faced by the travellers. About one and a half century ago the fastest a man could travel was probably astride a galloping horse compared with the Boeing of today carrying 100's of passengers, travelling at twice the speed of sound, and spanning thousands of miles between the continents of the world, in a single flight. Communication was by a man on horseback and by stage coach taking days and weeks, compared to emails, micro waves etc bounced from satellites which provide us with almost instantaneous transmission today. An engineer today could handle a complicated design by himself whereas in the past they must have employed a team of engineers to do the same work relying heavily on their assistance, judgment and integrity.

Despite the difficulties of transport and communication, engineers in the previous era have constructed great bridges, canals, over 1000 miles of road, together with harbours and other structures. Even stupas, kovils, churches, mosques etc. were built to perfection.

The great developments carried out in construction of roads, bridges, canals, docks and harbours, did of course provide great opportunities for the employment of engineers and contractors. Presently, stricter education and training is now required by the Institution in order to obtain professional status, or otherwise to become a chartered engineer. We must be aware, however, that on the demands which we make upon young engineers we should not attempt to stifle the energy and the ambition of youth itself and make our profession less attractive than others to the young person embarking on his career. Therefore we have to support our budding engineers to become chartered engineers rather than discouraging them by expecting too much of general knowledge which we believe that they should possess.

Presently I function as a visiting lecturer in various institutions and also at the universities and I am highly impressed with the training and guidance given by certain professional institutions to their graduates to qualify them to become corporate members. A vast variety of subjects are being taught to them such as environmental law, UDA regulations, labour laws, contract laws, Conditions of Contract, accountancy, management, office practice etc. I have tried my best to formulate the professional examination of the IESL on these lines so that our engineers too may be taught important subjects which a university cannot teach them as they are too general in nature. But disappointedly the majority was not prepared to accept my proposal and ultimately I had to give up lecturing at the IESL for professional examinations, while I continued to lecture at other institutions.

I started my practice as an Executive Engineer in the Department of Highways where I had to give instructions and orders to remove structures whenever there were encroachments into the road reservation. For that I had to be aware of the Thoroughfare Ordinance. I did not know the 'ins and outs' of what an Ordinance was apart from giving instructions and orders in compliance with the Ordinance. From the very first day, I worked at how to get a transfer to the Design Office in Colombo so that I could practice what I have learnt at the University. But ladies and gentlemen, that was not easy either, as designs office experience has to be gained from the Design Office. Therefore, moulding professionals is not teaching them general knowledge as some of us would believe. They should not only be taught how to put theory into practice, but should be taught non-engineering subjects such as management, law etc. as well.

Technology in the first half of the 19th century, and beyond, was based mainly on empirical rules and practical experience. Formal engineering education was certainly not considered worthy of notice by universities.

It is perhaps of interest to note that Professor Rankin of 'earth pressure' fame, was one time an Associate Member of the Institution of Civil Engineers (UK), but when he applied for Full Membership he was rejected for some obscure reason, and he resigned from the Institution in anger. However thereafter following Rankin's death, the ICE has been very kind to have the annual Rankin Lecture. Membership cannot be denied to any engineer who can prove his qualifications and competence and whose experience, reputation and character should be correctly vouched for by his sponsors. However the Institution has no place for half-baked people whose competency is manipulated. But the Institution is not reluctant to recognize people who have done great service to the society. We have done so in the past, and in the future too we will continue to honour them as Honorary Fellows or Honorary Members.

Towards the end of the last century, the supremacy of theory over rule of thumb, has gradually but surely asserted itself. Although at times the want of common sense and experience in the application of abstract principles has led to disasters quite as serious as those which arose from want of theoretical knowledge, and in this respect the competent and successful engineer will show himself as a man who in his work is careful to make theory and practice walk side by side, one aiding and guiding the other and neither of them asserting undue supremacy.

There is undoubtedly a gap existing between the theoretical world of engineering education and the scene of our activities lying outside the university. A period of training or experience is necessary to fuse engineering knowledge into a complete whole, and to allow the engineer to recognize the restrictions and constraints, which the world of practice can impose upon unrestrained theory. Sometimes the young technician can seem to be much more expert and talented and probably more financially rewarded than the newly graduated engineer. This is the period when the immature young graduate has to be tutored by experienced and understanding engineers and escorted into his professional life. Therefore IESL has a greater role to play in grooming young engineers by helping them to obtain proper experience and we as senior members have a greater responsibility in carrying out this task. I shall do every thing possible to achieve this target through the IESL.

The importance and necessity for this fundamental training and experience has been fully appreciated and is one of the main ingredients in our aspiration, towards greater professionalism and status in our society. Both the academic and the practicing sections of our industry must combine to achieve this objective of adequate training and experience. The academic world probably is of the opinion that industry is lukewarm towards the duty of training graduates, and industry on the other hand argues that the cost is too high and out of proportion to any return which might be expected. With the tighter margins experienced over the recent years of recession, this is quite a real problem to many firms, who have co-operated well in the past and who now prefer to recruit trained engineers only. Training of young engineers is, however, a fundamental obligation, and our profession must accept this responsibility. There might be the argument that a firm is willing to provide experience but not training. The danger would be a comparatively narrow experience, lacking in wider professionalism. The Institution must and should offer support to overcome this barrier. Therefore I intend to give more prominence and publicity to the value of training graduate engineers in order to change the mindset of the industry.

Our industry has had a remarkable record of achievement abroad and has earned great prestige in addition to valuable foreign exchange. One of our main strengths in these achievements has been our cadre of trained and qualified engineers. Resources for such training, however, can only be available in a viable industry with a firm base-load of work in our own country. Government (that is, both national and local) is now practically the sole patron of engineering, either by virtue of direct contracts or by awarding contracts to the industry. Successive governments appear, in my eyes at least, to have appreciated the importance of a medium or long-term planning strategy which could stabilize a training policy. However I believe when it comes to engineers that the present young engineers do have the same opportunity that we had, of obtaining training which will benefit the development of this country.

Our profession, which is fundamental to the advancement of our material world, cannot today escape from the public eye. Our failures and occasionally our successes are beamed into almost every home, not only in our own country but in many countries abroad. The morning papers emblazon stories on front pages, and due to the advances of communication, we also cannot hide sensitive information from the press, the television camera or the microphone.

Unfortunately it is failure, or disaster, or our shortcomings which are highlighted, and our successes are often unrecorded, unpublished and unappreciated. The failure of a large dam, the collapse of a long span bridge, the huge escalation in cost of a project of national interest are the items which attract the headlines, not the success of constructing a harbour complex or completing a large sewage scheme or motorway on time and within the financial budget. Difficulties overcome are overlooked and appreciation and understanding are seen only in the eye of our discerning brother or sister engineer and not in that of the general public. I consider that it is important in drawing your attention to the problems experienced by the engineers. The presence of a rock in a harbour, the collapse of an underpass in a highway etc. are some of the events which are not uncommon internationally in the engineering industry. Foolproof structures can never be built when considering the nature and the complexities of the construction. Completing a project within duration and within the cost does not attract public attention. Therefore we have to make the public aware of important engineering news, and the only way is for our engineers to write to the public newspapers of whatever work they do and the progress achieved. I, as the President, do intend to give all assistance to them.

There have inevitably been a curtailment in the number of contracts available, and in an endeavour to keep contracting organizations functioning, contracts have been taken with little or no margin. This is the recipe for trouble, quite understandably, as tremendous effort is made to recoup costs in extras and in claims leading to argument and dispute, resulting sometimes at the end of the day in both the engineer and the contractor being discredited. In my experience there has been a great proliferation of claims over the years and this may well be a self-criticism of our engineering profession. One of the most essential requirements before a contract goes to tender is to have sufficient lead time for its effective preparation and to allow the contractor an adequate period for the examination of the documents, to decide on his methods of construction and to price his tender. Time is a commodity which we surrender too easily. Speed can so often be a delusion for efficiency. Therefore we have a responsibility in educating our engineers in contract management and dispute resolution and at the same time openly discuss these problems either with administrators or the legislators (politicians). The training of engineers in these fields shall be enhanced as every decision of an engineer would have a great impact on the projects cost and quite often these costs are in the order of millions of rupees.

The profession should, however, remind the public from time to time of the great part it has played, and is still playing, in the evolution of our civilization and society. The prevention of disease and the improvement in the environment and social services has been largely due to the influence of the engineer. We provide the infrastructure upon which civilization is built. Televisions and computers are the most effective medium of the transmission of information today. Although the engineers

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PRESIDENT'S SPEECH....

are responsible for designing and building these electronic gadgets, we are the people who use them the least.

Concern is expressed from time to time amongst our membership that the professional engineer has lost his status in society and is not held in the same esteem as he was generations ago. The average member maintains that this is reflected in his rewards relative to those in other professions and indeed to those in other engineering disciplines. Our brothers and sisters in Law, Medicine, Accountancy and the Administrative service appear to be given responsibility at a much earlier age and they play an effective part in the political and social life of the country at both national and local government level. They appear to exert an influence in the formulation of policies and in the direction of events, whereas we engineers remain in the background and at most are occasionally asked for advice on a project of national importance which has been initiated by our lay brothers and sisters. This has to be changed.

A degree course in engineering is one of the most demanding of university courses, with considerable analytical content but possibly with only a limited concentration on the wider scene and on the use and application of the written and spoken word. It is perhaps unfortunate, that we do not learn language skills in our seats of learning. Effective understanding and even more effective communication is vital in our professional and business life. The English language is one of the greatest assets which we should nurture and cherish. Therefore I will make an effort to improve the language skills of our engineers.

When engineers meet, they talk about engineering experiences, problems and solutions, because we are intensely interested in and enthralled by our profession, and have little interest in affairs beyond our own boundaries. We tend to ignore other professions and the politicians. Our apparent failure in our search for status could well be echoed by Cassius in Julius Caesar: *'The fault, dear Brutus, is not in our stars but in ourselves……'*. Acceptance in the social order is transient, largely dependent on public acclaim, and certainly in the popularity ratings of today is the pop star, TV actor and the professional cricketer who are well ahead of the engineer. However, it was not always so, and Kulasinghe, Rampala, Wimalasurendra, and Ray Wijewardene were relatively well known household names in their days and were held in high esteem in society and were considered to be great benefactors to the nation. They were honoured by the nation and their great works were very well acknowledged.

Our status and our self-esteem, call it what you will, lies within ourselves – there is no Holy Grail for which we must search, on finding the prestige which we seek. Our status is dependent on ourselves alone and can only be earned by our own exertions and our integrity within our chosen profession. It is by strength of character, by independence, integrity and mental courage and vision that we could impress. If we engineers are to make a greater impact on our society then we too must penetrate the confining boundaries of technology into the wider world of influence.

I would like to remind you of the theme of my address, *'Change is not made without inconvenience, even from worse to better'*. We live in a fast-changing world and there is no doubt that to survive in the confused seas of changing social and professional philosophies we must have the courage to set our sails to take full advantage of the veering winds of change.

I would also like to mention something about an important event that occurred recently in our Institution, that is the annual elections that we held in order to select the members for the Council. It is extremely disappointing that there are at least six positions for which nobody has contested. This is not a very good situation. We are boasting about our numbers when we say that we have 14,000 members, out of which I presume at least 5,000 are corporate members. The participation in Council activities and other functions of the IESL is extremely poor. However, there are a lot of critics from the membership stating that the Council does not perform. It should be noted that all the work that is done by the Council members are voluntary, and apart from this the members have to incur expenditure on travelling and sometimes spend 3 to 4 hours at a meeting or function. Therefore, I request especially the young members, to participate in these meetings and other activities of the IESL. Sometimes it is embarrassing to note that there are only a very few people attending the memorial lectures which we have organized to honour our past engineers. If we do not protect the Institution there will be nobody to protect us. It is depressing to mention that there are a few members who are working against the interests of the IESL, which was evident when we met the Ministers and other politicians to get our Act amended and to get the Registration of Engineers Act recognised.

The Institution always recognizes its members whether they have enrolled from the University or any other Institution, as long as they have fulfilled the requirements necessary to obtain corporate membership. Therefore please join hands with the Institution and support our activities. It is very encouraging to us when a person enters as a Student and completes his professional examination conducted by the IESL. We are proud of such achievements. We want our professional engineers to be competent to work anywhere in the world and not second to any other foreign engineer. Unity is our strength. There are many works ahead of us which have to be completed and implemented and I need your cooperation and commitment to fulfil these goals. I wish you all the best.

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Ceremonial Inauguration....

"Outcome Based Approach to Modern Engineering Education", was held at Hotel Taj Samudra the next day, 22nd Oct. 2011, with guest speakers from among foreign delegates representing sister organizations and the Sri Lankan academia. The well attended seminar was followed by a Banquet dinner in their honour, at the same hotel.

A Field Tour was organized as another event of the Annual Sessions the next day, 23rd Oct 2011, to visit Mattala International Airport and the Hambantota International Cricket Stadium by way of the newly-built Southern Expressway. Many IESL members participated in the tour, while the foreign delegates were conducted on a tour of the Temple of the Tooth Relic in Kandy after which they departed to their home countries.

The Technical Sessions were held on the 24th and 25th of October during which 70 technical papers on research projects under various disciplines of engineering were presented and for the best papers of which awards will be presented at the next annual sessions. The Annual General Meeting was held on the 29th Oct 2011 at the Wimalasurendra Auditorium as the final event of the Annual Sessions.

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Faster Than....

sphere (2-D travel) while neutrinos travel directly through the body of the sphere (3-D travel). But no one explains how only neutrinos are capable of traveling through a fourth dimension, which seems to be beyond the capability of photons. Is it because neutrinos are the bourgeoisie of the fundamental particles while photons are part of the Janathawa?

Handicapped Photons: Another theory says that c is the speed of light in empty space and the universe is not actually empty but filled with some medium. Thus, what we consider as the speed of light (c) is not the speed in a true vacuum but the speed of photons that are somewhat impeded by whatever this medium is. On the other hand neutrinos are not impeded by this 'thing' that fills up space and win the race. Again they seem to consider it as a result of an unfair race where their favorites, photons, are subjected to an unfair handicap.

The Scientific Method: While the giants of the science community fight it out, commoners like us can enjoy it without taking sides, watching how the scientific method works. Either way, we have nothing to loose. One thing we can say is that no theory in science is sacred or can be held out as the ultimate truth. As Dr. Richard Fenynman once said, science thrives on skepticism. Good scientists are skeptical even about their own theories.

This is the type of thinking that our young engineers should inculcate. Never be blind to the possibility that you may be wrong. And when you have been proven wrong be humble enough to accept it gracefully. No one can be right all the time. Even Newton was found to be wrong (or at least inadequate) when Einstein discovered his theory and the same fate may be awaiting Einstein. In Science, there are no infallible Gurus.

The basic steps by which Science works are: (i) Observation, (ii) Making up a Theory to explain the Observation (iii) Making Prediction based on the concerned Theory. The proof of the theory lies in the accuracy of the predictions. But no amount of proof makes a theory an ultimate truth because there is always the possibility that, one day, evidence against it may be discovered.

Supernova SN 1987 A: One such remarkable prediction that comes to my mind has something to do with neutrinos. In the 20th century astronomers formulated a theoretical model of supernova explosions that large stars undergo at the end of their lives. The theory had very few observations to go by because these events are so rare. Between 1886 and 1986, none had occurred close enough to be observed using modern instruments. There have been 5 known supernovae within this period, but the closest of them 1972 E was 11 million light years away. Thus they had relatively scanty observational data on the process and the model was almost completely based on mathematics, stellar physics and computer simulations and not on direct observational data of supernovae.

The model predicts that a huge burst of neutrinos occurs simultaneously with the collapse of the core of the star, preceding the emission of visible light, which occurs only after the shock wave reaches the stellar surface, hours later.[1]However, proof had to await an actual supernova explosion and in February 1987 the scientists were rewarded for their patience. Three neutrino detector sites reported a significant increase in neutrino levels. Now other astronomers went in to action and a few days later, evidence emerged that a supernova explosion had occurred in a star 160,000 light years away (next door by astronomical standards)in the Large Magellanic Cloud, a close companion dwarf galaxy of our own Milky Way Galaxy. This event marked the birth of neutrino astronomy.

Time Dilation Effect: I would like to end this article stating my own thoughts on the neutrinos result. If neutrinos are traveling faster than light, then according to the time dilation effect of Einstein, they are traveling in to the past relative to us. Does this open up a way of the much speculated time travel?

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Driving in Super-Highways.....

lane. This lane is an extra piece of road from which the driver will be able to see and adjust to the traffic on the super-highway. If you are already on the super-highway, it would be a good practice to safely move your vehicle to the right lane so that vehicle on the acceleration lane will be able to change on to the left lane of the four lane super-highway (two lanes in one direction). After the interchange, you can safely change back to the left lane.

3. The driver comfort

In Sri Lanka, many vehicles are fitted with air conditioners. However, we have the habit of using it with re-cycling on (air conditioner working with re-cycling switch on rather than on fresh outside air mode on). This is logical in our roads with a lot of dust since the fresh air mode will need frequent servicing of filters of the air conditioning system. However, this recycling could be detrimental for the health of the occupants since recycled air could have accumulated CO_2 reaching a level much more than the recommended maximum of 1000 ppm. Continuous exposure to high level of CO_2 in the air that we breath could lead to drowsiness and sometimes to headaches. Since the super-highways will generally be free of dust, it is advisable to run air conditioners in fresh air mode when the vehicle is in a super-highway. Otherwise, frequent opening and closing of shutters also could be recommended (once in every 5-10 minutes).

If the vehicle is not fitted with an air-conditioner, it would be advisable to have the shutters only slightly open. Shutters that are fully open could increase the wind resistance to a significant level at high speeds and hence could contribute to a higher fuel consumption. Thus, it is the duty of the drivers to ensure adequate fuel in the vehicle if planning to enter a super-highway and to use the vehicle in such a way that the occupants receive sufficient ventilation while operating the vehicle at an optimum level.

4. Changing the lanes in super-highway

In a super-highway, we are expected to use the left lane. Changing the lanes should be considered only where there is a need. Always keep to the middle of the lane that you are using. Prior to changing the lanes, the driver has to follow mirror-signal-maneuver routine. It is very dangerous to change the lanes without consulting the mirror though we could see many drivers, especially those driving larger vehicles such as buses changing lanes without much concern to the other road users. When driving on super-highways, mirror-signal-maneuver must be followed by all the drivers irrespective of the size of the vehicle that they drive.

5. Overtaking in super-highways

In super-highways, generally, it is not necessary to overtake since all the drivers are expected to drive at 100 km per hour. However, if it is necessary, it has to be a very carefully planned activity. Overtaking is possible only when there is sufficient space and also enough gaps. The position-speed-look routine is the first step. The correct position is to keep a good gap from the vehicle that you are going to overtake. Next, it is important for you to ensure that your vehicle is capable of accelerating to the speed required for overtaking within a reasonable time. Otherwise, it would be advisable to follow the vehicle in the front since it is also traveling at a high speed though may not be at 100 km per hour.

6. Braking and changing traffic conditions

In a high speed road, it is important to observe as much as possible so that a high level of anticipation can be maintained. In driving, anticipation means acting promptly to fit in with what other road users are doing as well as being able and ready to alter your own course or behaviour as a situation develops. Experience and anticipation are vital to prevent possible dangers from becoming actual dangers.

Because of the high speeds of super-highways, any braking must be unhurried and carried out progressively so that it is properly spread out. Braking changes the traffic conditions on super-highways and hence the drivers should be aware of the consequences of such actions. This also indicates the need to keep a sufficient gap with the vehicle in the front. The general rule is 1 meter for every 2 km per hour speed. For example, for 100 km per hour, it is ideal to keep a 50 m gap though it may sound too high. However, at 100 km per hour, the distance that the vehicle travel while moving the foot from the accelerator to the brake is about 15 meters. The distance that the vehicle travel before it comes to a halt is about 35 m. This indicates that a 50 meter gap could be very reasonable.

Another rule is counting by saying *one second, two second* when the vehicle in front of you pass a fixed object. If your vehicle passes the fixed object in less than 2 seconds, you are driving too close to the vehicle in the front (the time taken for you to say *one second two second*; you have to do this since there is no way of looking at your watch when you are driving close to 100 km per hour). This is called leaving a 2 second gap in countries like United Kingdom and USA.

7. Leaving the super-highway

The driver who enters the super highway must have a good idea about the destination they wish to reach and also the route that they have to follow. The driver has to read the road maps carefully and store the data in memory. It will not be possible to get any information from other road users by stopping the vehicle as we often see on other roads. Both stopping and reversing are prohibited on super-highways.

The exits are usually marked with sign boards with blue colour background with white colour letters indicating the details of the exit at least two km before the junction. The road that has to be taken after the exit will be given in *green* colour background (A or B class road). Hence, it is the responsibility of the driver to plan and take the proper exit slip road through a deceleration lane. The driver should never slow down while approaching a junction until the lane has been changed to the deceleration lane.

The speed can be reduced to 60 km per hour or less as indicated in the road signs. It is essential to look at speedometer since driver finds it very difficult to judge the speed after driving ½ hour to one hour at 100 km per hour. A speed of 80 km per hour may be felt as 40 km per hour unless the actual speed is judged with the speedometer. This good practice will allow the driver to reach the toll gates, if any located at the exit, safely.

8. Night-time driving

Super-highways are not generally provided with street lights except at grade separated junctions where exit and entry are allowed using slip roads that can be used either for acceleration or deceleration. If you use headlights, it can dazzle the incoming drivers. Therefore, it is advisable to use dipped beam of vehicle headlight. Since the night time may not allow very high level of visibility, a greater degree of anticipation will be vital. If you are dazzled and compelled to slow down, be aware of the traffic behind. You must never brake suddenly.

Judging the speed and judging the distance of other vehicles are both more difficult on a super-highway at night. Thus, changing lanes in night will need special care. You must use signal indicator with ample time ahead of maneuver.

The *eight points* described in detail have highlighted a number of facts that must be firmly established in the mind of a driver who is planning to enter a super-highway.

It is also necessary to keep in mind that paying a toll will not entitle the motorists to any special privileges. All the users of a super-highway will be sharing a common facility with great respect to others. One of the main reasons to promote the super-highway is to improve the road safety by separating the pedestrians and other slow moving vehicles such as three wheelers, motor cycles, scooters, carts, land vehicles from the other vehicles that travel long distances at higher speeds.

The importance of accident minimization can be looked from the point of view of accident costs. If a fatality occurs due to an accident, its cost to the national economy was approximately identified as about 1.3 million Rupees in 2000 prices (about Rs 7 billion for all the accidents). It would be about Rs 4.5 million in 2011 prices per fatality. In a country where about 2000 fatalities occur, the accident cost only due to fatal accidents can be estimated at Rupees ten billion or 0.2% of GDP of Sri Lanka which now stands at Rs 5000 billion. (The total cost of traffic accidents could be as high as Rs 25 billion for the national economy in 2011 prices or 0.5% of GDP.)

Thus improving road safety by acting in a responsible manner leaving aside the arrogance that we have seen with some drivers while understanding the need to share the facility with a good vehicle would be the key to accident free, safe, comfortable, fast and efficient use of super-highways of Sri Lanka.

I wish you all a safe and comfortable journey where you would willingly pay the toll to maintain the facility with a high standard while providing funding necessary for the further expansion of the super-highway network in Sri Lanka.

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IESL Building.....

address explained the efforts that went into organizing the clinic at short notice and thanked all those who helped.

Thereafter Eng. Prabodha C Ginasena who had the brainwave that led to the first ever Building Clinic spoke to the audience and expressed his happiness to see his idea being adapted and put into practice. He explained how the idea originally came about and its essence being cost free advice and cost cutting on the actual work through reduction in wastage. He delivered the vote of thanks ending the ceremonies held in the 2nd Floor of the premises. Eng(Ms) Shashikala conducted the ceremonies while Eng. (Ms) Champika J Ranasinghe, Eng. (Dr.)Ms Namali, Eng. Prabodha C. Jinasena were actively involved in the organizing of the clinic. Refreshments were served thereafter.

The actual Building Clinic were held in the 1st floor of the premises with separate areas being allocated as consultation areas for the people seeking advice on particular buildings related problems faced by them. These were the parallel sessions with capacity to provide advice to up to four consultation sessions simultaneously. Meanwhile a seminar was organized on subjects of general interest on the 3rd floor of the premises with the opening presentation being given by Eng. G.W.T Kandamby on the topic of "Cement Stabilized Rammed Earth for Housing'. The audience was at liberty to move out of or into the seminar hall as and when they require to have consultations on a problem from the Building Clinic in the 1st floor.

Local people were seen coming into the clinic in trickles at the start due to not many being aware at the start but with awareness creation being done throughout the numbers showed some improvements in the latter part of the duration of the clinic which concluded around 3.00 pm in the afternoon.

Contd. from page 5....

Road Accidents.....

(a) In addition to this, the Buddhism express that results are easier by visual form of which was applied successfully to teach and obey Rupananda, the uppish beauty queen as a one example .In the other hand, visualizing comes under the meditation and its further end extends up to the great “Chinthamaya Gnana”. For easy understanding, it says in general that one picture gives the idea more than given by thousands of words.
Categorically the mind mapping is inherently bound by nature with the technique of arrest at mind level and it also fulfills the adequate minimal factor (concept) as well.

Hence in this three in one set ,mind mapping plays the vital role, as a so simple and speedy pre preventive measure.

Not to forget that the pictures are more effective than words and the sentences as far as the drivers different intelligent levels are concerned. Visualizing the incoming vehicle before it really happened, would strengthen the pre-preventive techniques by giving a visual mode. Summarizing the above techniques of arrest at mind level, adequate minimal and mind mapping are in join hands at the parade in front, to look after any accidents. Hence this three in one pack of techniques is at the supremacy as far as the arrest of accidents is concerned.

In the other hand, it is a solution found from the religion rather than from law which shows the power of religion, (if search), ahead of law. This effective tool would alert the overtaking driver to the maximum and be the art of maximum for driving and overtaking.

In the other hand this three in one set is also a preplanning technique which has been planned to the worse (ie. overtaking) and It would work effectively with every other phase of driving as well. Hence the three in one pack would solve the new burning problem of Sri Lanka ; ie, the road terrorism which remains after defeating the 30 years of terrorism.
Initially at the transition period it would work with the strict enforcement of law with heavy panalties since any road violation is being committed with the best knowledge of mind mapping three in one pack.

(Not to mention the necessity of training and educating the people for this pack before hand which would be easy through mass media in couple of week time. Further a new law (offence) could also be introduced to the charge sheet for the failure in mind mapping pack.)
Three in one pack is so strong that, after the transition period it would withstand alone for any kind of accident very effectively by pushing the law enforcement to a passive role.

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