IPET News Dec 2009

PO Box 1824, Randburg, 2125. Office Tel / Fax (011) 787 9706.
E mail engineer@netactive.co.za
Editor V Nel, Pr Tech Eng. Language Adviser. P McLeod

"Tackle a Block at a Time".

In this issue

No 1. Editors Comment

In preparing these eNewsletters I am reminded of the probable original intent i.e. to create a vehicle for knowledge sharing among engineering practitioners and other stakeholders.
Thus from time to time I pause to reflect on whether or not this is being achieved, and if so, whether or not it can be improved.
In undertaking this review, once again, before putting this issue together, I came to the conclusion that perhaps I could structure the eNewsletter in a way that improves this knowledge-sharing imperative. While this edition of the eNewsletter is somewhat different from previous editions, it hopefully focuses on some key items.

What is requested of you, the reader, is to comment and provide some feedback and suggestions for the eNewsletter.

It is hugely disappointing to receive an E Mail back months later that states the eNewsletter was deleted without ever being read or opened. Yes, this happens and I have at least 10 of these on file!
Your co-operation will be greatly appreciated!

No 2. Festive Season Messages.

December holidays are around the corner, and I am sure many of us are looking forward to a well-deserved break.

During this break, please take time to think about next year, 2010, and what you as a technologist can contribute towards the climate change challenges and the future generation of technologists as a whole. Let us look at the current infrastructures, how we technologists can modify, in an innovative way, the existing infrastructure to become a green infrastructure that is energy efficient.

No 3. To see the state of the World today
Click the following address: World Clock
<http://www.poodwaddle.com/worldclock.swf>

With the current economic slowdown, government will spend less on new infrastructure. We should therefore look at the maintenance of the existing infrastructure, taking into consideration the environment and growth of the users.

We should use methods and tools that we have developed in order to facilitate the solution of the society practical problems.

A technologist should have knowledge that deals with the creation and use of technical means and their interaction with life, society and the environment.

I want to use this opportunity to thank you all for your loyal support and input the past year. If you take the road, please drive safely. Enjoy your holiday and my best wishes for the festive season.
Regards

Kwezi Chabikuli, Pr Tech Eng, Senior Vice President IPET.

Unyaka Ka 2010. (EsiZulu).

Amaholide kaDecember aseseduze, ngiyathemba abaningi bethu bawalangazele ukuze sizokwazi ukuphumula.

Ngale sikhathi sokuphumula, bengicela nithathe isikhathi sokucabanga ngo 2010, ngezinto wena njenge Technologist ongakwenza ukusiza ngokuguquka kwesimo sezulu kanye nezizukulwane sama Technologist sisonke. Asike sibuke izingqalazinda zamanje, mase thina njengama Technologist singazama kanjani ukuthi siqhamuke nendlela ezintsha zokwakha izingqalazinda ezonga ugesi. Ngalesimo somnotho esikhula kancane, uhulumeni uzonciphisa izimali kwezakhiyo ezintsha. Ngakho kumele sinakekele lezakhiwo ezikhona kanye nemvelo nokwanda kwabantu abayisebenzisayo.

Kumele sisebenzise izindlela namathuluz ukuze sithole isambululo zeyinkinga zomphakathi. I-Technologist kumele ibe nolwazi nezindlela zokumelana nokwakha, nezindlela impilo, umphakathi kanye nemvelo.

Ngicela ukuthatha lelithuba ukuthi ngibonge ukuzinikela kwenu okuthembekile kulonyaka odlule. Uma uzosebenzisa inqola yomlilo ngaliholide, ushayele kahle ube nokhisimusi nonyaka omusha omuhle.

Regards

Kwezi Chabikuli, Pr Tech Eng, Senior Vice President IPET.

Feesseisoen Boodskap – Desember 2009.

Soos ek hier skryf, snel 2009 baie vinnig tot ‘n einde. Hierdie was werklik ’n baie belangrike jaar vir Suid-Afrika. Ons het in April 2009 ons vierde demokratiese verkiesing gehad. Ten spyte baie doemprofete het die verkiesing vlot verloop en Mnr Jacob Zuma is ingehuldig as vierde demokratiese verkose president van Suid-Afrika.

Suid- Afrika was die gasheer vir die 2009 FIFA Sokker Federasiebeker (FCC) waarin agt lande deelgeneem het. Die FCC het goed afgeloop en het gedien as’n repetisie vir die 2010 FIFA Sokkerwerldbeker (FWC). Die FWC vind plaas in Junie en Julie 2010 en 32 lande sal dan deelneem. Die FCC is aangebied in vier stede. Wedstryde het plaasgevind in Johannesburg, Rustenburg, Bloemfontein en Pretoria. Die buitegewone reen (vit die Hoeveld) vroeg in Junie 2009 het probleme veroorsaak, maar , na alles, was die FCC ‘n sukses.
Die harde werk wat ongeveer vyf jaar gelede begin is, sal uitloop op die grootste sportgebeurtenis wat hierdie land ooit gesien het – Die 2010 FIFA Sokkerwereldbeker.
Soos die jaar ten einde snel, sal die meeste lede van IPIT ‘n welverdiende ruskans geniet.
My wens is dat elke lid van IPIT ‘n Geseende Feesseisoen sal geniet in die teenwoordigheid van hull geliefdes en dat ons almal verfris 2010 sal aanpak.
Die jaar 2010 sal ‘n enorme uitdaging wees vir Suid-Afrika maar hierdie uitdaging sal aanvaar word deur alle Suid-Afrikaners en Tegnoloe in besonder.

Willem Badenhorst Pr Teg (Ing)
Namens
Jan Lessing. Visi President IPIT.

Xmas Messages continued.

To all of you in as many South African languages that I could find, and apologies for the spelling and any mistakes as well as for those left out. (List in random order)!

Ndebele	Imfifela
North Sotho	Madume a ngwaga
South Sotho	Tumediso tsa selemo
Afrikaans	Geseende Kersfees en 'n voorspoedige nuwe jaar
English	Happy Xmas & a prosperous healthy new year
Swazi	Tilokotfo kwetitsi temnyaka
Tsonga	Ngemibuliso emihle
Zulu	Izilokotho ezinhle

To all our members of all religions may I wish you and your families a safe, happy festive Christmas season and a healthy, prosperous and crime free New Year.

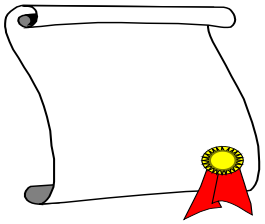
Viv Nel, Pr Tech Eng,, IPET Chief Operations Officer

And for the Ladies.

In the year 2010 may your good health be confirmed by your dentist, gastro-endocrinologist, urologist, psychologist, optician, and may your physiotherapist, chiropractor, therapist and your slimming clinic tell you that you don’t have to come anymore.
May your doctor know where to begin and may your masseuse know where to stop.
May your salary, your housing subsidy, the contents of your house and all your shares increase in value, and may your blood pressure, weight, house loan, tax and cholesterol all decrease.
May all your friends remember you and may the taxman forget that you exist.

May hijackers, car thieves and rapists overlook you and may your loved ones always see you.
May your walls be too high for the neighbourhood thieves but low enough for you to climb over when you have forgotten your keys.
May you have an honest government and a dishonest beauty therapist.
May you have a great 2010

No 4. Continuing Professional Development (CPD) Certificates.



By Snail Mail together with a Calendar etc you should receive a CPD Certificate proving your membership for the year. This entitles you to claim one credit on the Engineering Council of South Africa (ECSA) CPD system (Category 3).
Please note that CPD only applies to individual ECSA registered members and not Company, Sponsor or unregistered members. ***Also note that you are still required to gain credits in Categories 1 and 2.***

If the information printed on your CPD Certificate is incomplete or inaccurate, it is because we were not provided with your **full** and updated information. Our database may therefore not be fully up to date. Information update forms are sent out regularly and were included in a number of Newsletters. They are also available on our Web site http://www.ipet.co.za.

If you need an amended CPD Certificate kindly **request it in writing**, and supply the full information required.

If you have not received a CPD Certificate, it is probably due to one or more of the following reasons: -

- **You are not listed as being registered with ECSA or you have not advised us of your ECSA registration and ECSA number.**
- **Your membership account is in arrears.**
- **Other.**

With accounts that are due only once a year we find that some members forget to pay, despite reminders in addition to the original invoice. This oversight sometimes happens to busy professionals.

Some members, or their firms, pay directly into our bank account, but neglect to include membership numbers on the bank deposits as a reference. This sometimes also happens with company cheques, which we receive with no indication of which member's account is being paid. The bank account statement received from our bank often reflects no traceable details of the payer. The space allocated for this is limited, so we request the membership number first, followed by last name and initials. This is in preference to names only or telephone numbers. (Telephone numbers, where quoted, often do not include the area code and are thus unusable in trying to trace the member).

The above problems result in us receiving payments but being unable to identify whose account is being paid! Where we cannot trace the member due to lack of information the payment is lodged in a suspense account.

There may be an error in our system but we will be pleased to amend our records on receipt of documentary proof of payment. If you have any queries please post or fax them to us **in writing.**

Full instructions requesting a copy of the invoice plus details of membership number and last name and initials are printed in the notes on the invoices. Direct payment and electronic payment details, as well as our bank details, also appear on the back of our invoices. Membership numbers **must** be quoted as many members have the same last name and initials. **A readable copy of the deposit slip / or printout of the electronic transfer must be posted to us to ensure that your account is credited.**

We respectfully point out that the responsible person is the member and **not** his /her employer or firm. As such the onus is on the member to ensure that the annual fee is paid and IPET advised. Claims of payment must be accompanied by **documentary proof of payment**. (Photostats of processed cheques, deposit slips and electronic transfers that indicate the amount paid, the bank account it was paid into and the date of payment is acceptable). Telephone calls and messages stating that the fees were paid are not acceptable. If we react to these our auditors can view this as fraud as no documentary evidence has been provided.

Any payment arrangements the member has with his employer or firm are internal arrangements between the member and employer. We cannot assist if the member has problems with getting the employer to pay.

No. 5. Continuing Professional Development (CPD). General Details of the Scheme.

After more than three years the process of consultation and debate with stakeholders in the profession, including voluntary associations such as ours, the Engineering Council of South Africa (ECSA) approved a formal system affecting all registered engineering practitioners. This came into affect from **1st January 2006**.

CPD may be defined as "the systematic maintenance, improvement and broadening of knowledge and skills, and the development of personal qualities necessary for the execution of professional and technical duties throughout an engineering practitioners career".

The Engineering Profession Act 46 of 2000 requires that registered practitioners have to renew their registration at regular intervals. ECSA decided that the most appropriate way to implement the Act would be to link renewal of registration with CPD.

ECSA has attempted to design a system that is not a millstone around the necks of registered practitioners. A reasonable system of earning points or credits has been devised. This system includes attendance at educational / academic courses as well as work-based activities. The 5 credits per year, or 25 credits to be acquired over a 5-year period, should be easily achieved with the three categories of CPD. While a minimum of 3 credits must be earned per year, excess credits can be carried over.

A very brief summary of CPD requirements follows;

Category 1 which requires 2 credits per year has proved to be the most difficult and controversial. It is however not difficult to attend 2 accredited Courses / Seminars a year.
Category 2 awards workers 2 credits for just working more than 800 hours a year!
Category 3 awards members of an ECSA recognised Voluntary Association 1 credit for membership.
The above are not the full or detailed requirements or methods of obtaining credits. See previous and future newsletters about CPD courses and news.

While registered persons are required to submit their CPD details annually just before the date on which they were registered, they may prefer to submit their CPD details annually around Dec / Jan as this is when they receive their annual CPD certificates proving membership for the past year from the Chamber. ***To assist members the relevant ECSA form to be completed is attached to this newsletter as separate file.***

Please note that completed CPD forms must be sent direct to ECSA and not IPET!

REFERENCE SOURCES;
ECSA Web Site www.ecsa.co.za

There are many CPD courses available from various providers and these are listed on the ECSA Website www.ecsa.co.za

IMPORTANT NOTE!! Fees for 2010 are only due in April 2010. Invoices will be posted by mid March 2010.

No 6. The Post Office Blues.

The post office reports that in the financial year ending in March 2009, mail volumes dropped by 5.8%. Growth in the previous 5 years had been between 7 to 10%. The 2009 profit was R362.9 million rand, which is 4% down from the R377 million for 2008. Cash flow from operations increased from R305.8 million to R649.8 million. Capital expenditure also increased by 65% to R643 million compared to last years R305.8 million.

Editors comment.
Of interest about the post office are our experiences with the Randburg branch. Over the past months they have often been off line, have had no supply of prepaid postage DL envelopes, no R5.65 stamps for sending out certificates and are unable to make up the correct amount for these either. Post deliveries to post boxes appear erratic with no post for days then suddenly the box is overflowing. During the 3-week postal strike we had no post for some days before the strike started and it took around a week after the strike ended before post started coming in again. Quite a few items, which we were expecting, have never arrived. Posting items out during this time was also a problem as the letterbox was often overflowing and apparently only cleared about twice a week. The branch has no manager and service in general is so bad we have complained to their Head Office in Pretoria. Head office management was in fact very helpful and helped us source stamps at Honeydew branch, which was apparently the only one of the 6 local post offices that could assist!

No 7. E Mail Woes & Tips for Members.

To the subscribers who do not get our bulk mailed E News, we offer some tips!
Subscribers of the two Telkom email servers must simply activate their anti Spam programs on their mother pages. The step-by-step process is very user friendly; except that when you choose your parameters, simply accept their suggested values.

Absamail and other ISPs have similar rules. Check out your supplier if you experience lack of E news from us.

Members who supplied E mail addresses which end in **Spoornet, Transnet, Eskom and any Government (Gov and Departments)** are warned that our E Newsletter and any E mail going to a group is usually stopped as it is suspected that it is Spam. This unfortunately also applies to certain other companies. The worst cases are Eskom and Government addresses. Absa and Telkomsa.net are others, but In Boxes being full also causes rejections. Regular downloading is recommended!

Emails from us come from any of the following E-mail addresses.
engineer@netactive.co.za
jjconsultancy@gmail.com

jameshellerjhb@gmail.com
jamesheller@mapactive.com

Members must either make arrangements with their ISP and IT people to let newsletters through or supply a personal private E-mail address. Those with no E-mail must please visit a friend who does have access to the Internet and / or regularly visit an Internet Café and go online.

Please see our Website where we list some of the suspect names. This is updated from time to time. Visit our Website regularly to check out the Newsletters etc, which are updated from time to time.
If your contact details change kindly complete the information update form, which you will find in various newsletters and also on our Website.
www.ipet.co.za

Your co-operation in this regard is much appreciated.
Thanks!

No 8 Office Hours Notice.

Members are reminded that our office is staffed on a part time basis so when phoning you may only get the answering machine. We answer telephone messages, faxes and E-mails the next working day whenever possible. Also kindly note that the message and fax machine is generally only on from 08H00 to 18H30 each day as we have had to switch it off after hours to stop receiving advertising faxes which come through in large numbers after normal office hours! If at other times the phones just ring and ring then we are experiencing a power failure. During the past 2 months we have had a total of approx 7 days of no power, ranging from 2.25 days of no power to the shortest period of 5 hours!

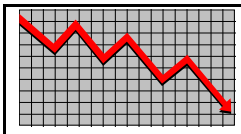
No 9 In Memoriam.

Vivian Barnard (rip)
Born: 7 Feb 1924 - Died: 11 Sept 2009

It is with great sadness that we have to inform members that Viv Barnard, the previous IPET Administration Officer and a very active member who served on various IPET committees, passed away after a long illness on the 11th Sept 2009. He leaves his wife Georgie, two sons, a daughter and a grandson.

Viv was registered as a Professional Technologist and served on the SAARET Committee, which was the platform from which the Institute of Professional Technologists was launched. Following the formation of IPET, Viv served as the Administration Officer. He was highly involved in, and worked tirelessly to improve, the recognition of technologists.

The funeral service was held at 10h00 in the St. Paul's Church, Mulbarton on Thursday 17th September, attended by a large number of friends and relatives as well as several members of the IPET Council and the Technologists Registration Committee of ECSA.



No. 10 Statistics

ECSA has the following numbers of persons registered and the figures are going up each year!

(Kindly note Candidates are excluded (some 9000) and the figures change from time to time but were accurate at the time of going to the press).

Prof Engineers 14774

Prof Engineering Technologists 3417

Prof Engineering Technicians 2067

Registered Engineering Technicians 935

Registered Master Technicians 436

Prof Certificated Engineers 1042

Registered Lift Inspectors 165

Registered Lifting Machinery Inspectors 666

(IPET has approx 1050 members).

No 11. The Worlds Largest Wind Farm in Texas USA.

Renewable energy gets a boost as E.On Climate and Renewables announced the completion of the 781.5Mw wind complex at Roscoe, which can supply some 230,000 homes. The farm covers some 100,000 acres of land spanning four counties. The CEO Mr Frank Mastiaux says that this has increased their wind park capacity world wide

to 2600 Mw with over half that total (1500Mw) being in the USA.

No 12. Wind Power in SA.

Capital costs for wind power in South Africa are estimated at around R25000/Kw for units of greater than 1.5Mw. With minimum wind speeds of at least 15Kph world wide (and the Darling site in SA) experience has shown that wind power is only available around 15% of 24 hours on average.

It is estimated that using all the windy sites in SA would yield about 19700Mw peak power but at an availability of only 15% of the time, this would only be approximately 12% of the country's electricity needs.
Due to the shortage of funds ESKOM appears to have postponed any wind farm developments.

No 13. ESKOM Electricity Charges.

Eskom has called its application for a 45% per year electricity tariff increase over the next three years a "smoothed" hike. In reality, it implies a massive hike of 204.9% over the three years. It will, calculated with the previous two hikes of 27% and 31.3%, represent a total increase of 408.4% over a period of five years and that excludes the 14% VAT that ordinary persons will have to pay on the higher amounts. This will turn the country's previously investment-friendly electricity cost regime into one of the most expensive in the world.
Eskom is currently claimed to be one of the world's four cheapest producers of electricity.

No 14. The Internet versus TV!

The United Kingdom has become the first major economy in which advertisers spend more on Internet advertising than television. It spent a record £1,75-billion in the first six months of the year.

It is a watershed for the embattled TV industry, which has been the leading ad medium in the UK for almost half a century. It has taken the Internet little more than a decade to overtake it.

The Internet now accounts for 23,5% of all advertising money spent in the UK, whereas TV ad spending accounts for 21,9%.

Although the UK is not actually the first country where Internet ad spending over took TV ad spending, it is the first major economy to do so. Denmark reached the milestone about six months ago.
Source Various Internet News sites.

No 15. Digital TV in SA Delayed.

South Africa is unlikely to meet its November 2011 digital broadcasting deadline, unless the government receives more assistance from industry participants, a top government official recently stated.

The Deputy Minister of Communications, **Dina Pule**, has said that the country has already missed its 50% digital broadcasting coverage target for the end of this financial year. It was covering only around 33%.

South Africa was unlikely to make its 80% coverage target for 2010, and its 100% coverage target for 2011, if it did not receive assistance from industry participants.

South Africa switched on the digital signal on October 30, 2008, starting a dual-illumination period during which both the analogue and digital signals are broadcast simultaneously.

Communications Minister **Siphiwe Nyanda** called on industry to assist government in awareness campaigns, aimed at informing the public on the new era of broadcasting.

Pule noted that despite the delay in consumer coverage, progress around the implementation of the digital migration had been made. Since the switch on of the digital signal in 2008, the South African Broadcasting Corporation (SABC), M-net and E-TV have all run pilot projects in digital format.

Further, Cabinet has approved that five million poor television households be subsidised on their set-top boxes, and an amount of R400-million had been set aside for this purpose.

The South African Bureau of Standards was also at the "final stages" of gazetting a standard for these boxes.

The industry is migrating to digital TV in accordance with the International Telecommunications Union (ITU) directive to ensure ongoing co-ordination and protection from interference. The protection that all countries enjoy will come to an end by the year 2015. It is therefore crucial to complete migration before 2015. South Africa has coordinated its frequency band plan with other countries to ensure that there is no interference between various other countries.

No 16. Alternative Fuel News.

Sugarcane has probably been the most successful alternative fuel so far. This is the crop fuelling Brazil's ethanol industry, which is the second largest in the world (at 24.5 billion litres in 2008). It is considered to be the world's first sustainable bio fuels economy. Sugarcane is much more efficiently converted to fuel than corn. This is because a by-product of sugarcane known as bagasse can be used to heat the distillation process.

Ethanol fuel is not as efficient as bio diesel. Now efforts are underway to convert more of Brazil's sugarcane to diesel instead. The bio diesel market is producing about 10.9 billion litres a year!

In Brazil the crop occupies only 2 percent of Brazil's arable land.

No 17. Paradise of renewable energy still some way off

Societies globally may be heading for a world that will look dramatically different in terms of energy.

Towards the end of the 19th century, human society began

using fossil fuels. At first it was coal and, a quarter way into the 20th century, oil started taking over as the main source for the generation of electricity and the production of propellants for an efficient transport system.

Oil has a huge number of by products. These range from fertiliser to plastics, which had a significant impact on the way of life for all.

Progress has created a world in which access to electricity has achieved the status of being a 'basic human right', along with clean water, education and healthcare. Electricity has become an entrenched and inseparable part of our society.

World wide more than 40% of electricity is generated from coal and another 20% from natural gas. This of course generates a huge amount of Greenhouse gasses, which have contributed to global warming.

The peak of oil production appears to have passed and that makes the search for a new source of energy inevitable.

There is no single source of energy in sight so the need has become “renewable energy”.

At present renewable energy apparently only caters for 9% of the energy needs of the world’s largest consumer of energy, the United Sates of America.

Currently renewable energy and other alternatives to fossil fuels such as nuclear remain too expensive to compete with fossil fuels such as coal and natural gas.

Is there an answer in sight? Not yet!

Compiled by the Editor form many different sources such as various magazines, journals and the Internet.

No 18. Travel Statistics and Safety Tips.

First some statistics;

- Less than 54% of motor vehicle front seat occupants wear seat belts!
- Less than 8% of rear seat occupants wear seat belts!
- There are around 900 000 vehicle collisions in SA each year!
- Around 85% of crashes are attributed to human error (including breaking traffic laws)!
- Only about 10% of accidents are attributed to poor road conditions.
- Most provincial roads deteriorated from “good to fair” to “poor to very poor” over the past 10 years. (maintenance backlog is estimated at over R100 billion rand)!
- Around 150 000 people were injured in crashes in 2008.
- 60 000 people required hospitalisation.
- Approx 14 500 people died in road accidents in 2008.
- There are approx. 8 million licensed drivers in SA.
- The number of unlicensed drivers is unknown but suspected to be high.
- (Estimated that 85% of vehicles are unroadworthy or unlicensed).
- The average age of SA cars is 11, while trucks and buses is 20.
- There are estimated to be around 36 000 unroadworthy or unlicensed trucks on the roads.

Tips:

- Always wear seat belts (even if you have air bags).
- Use the combination of seat belts and air bags where supplied.
- Children should always be seated in an approved and suitable child restraint (Booster seats and normal seat belts for older children).

Accidents and Towing;

Towing rates are not regulated in SA.
Storage rates are not regulated in SA.
Beware of “free” towing, as other fees will be due!
Use only your vehicle insurers recommended towing company or the AA.
Make sure you phone your insurer / towing company on your own phone or if given another phone dial the correct number yourself. Do not under any circumstances let any one call your service provider for you! You must have the relevant numbers in your car. Do it now!
3 Remove all valuable items from the vehicle before it is towed away. Non-removable items such as mag wheels, CD players, spare wheel etc must be listed on the towing receipt.
Ensure that the fee and towing destination and your vehicles details are on the towing slip/ receipt before you sign! They must be agreed to by both parties. The tow truck driver’s signature must also be on the towing slip!
Traffic officers do not have the right to dictate which towing service you should use. They have the duty to keep the traffic moving so can have your car moved off the road.
Take photos if possible.
Make a sketch and show positions of vehicles relative to each other and landmarks.
Record the name of the tow contractor and company and their contact details.

Accident scene.

- Do not admit liability as this can invalidate your insurance.
- Do not sign any documents presented to you.
- Report the accident to the nearest police station within 24 hours and obtain an accident reference number, which you must keep (forever).
- Do not take any liquor or drugs unless instructed by a registered medical doctor.
- Take down names, telephone numbers, physical and postal addresses as well as

- identity numbers of all involved in the accident.
- Names, addresses and Ids of any witnesses.
- Vehicle information, registration numbers, license disc details, colour, make of vehicle and nature and extent of damage.
- Details of the other party's insurers.
- Damage to any other property.
- Note traffic officers name, rank, staff number and station.
- Particulars of other driver's employer and owner of vehicle if it's a company vehicle.
- Date and time of accident and physical location.

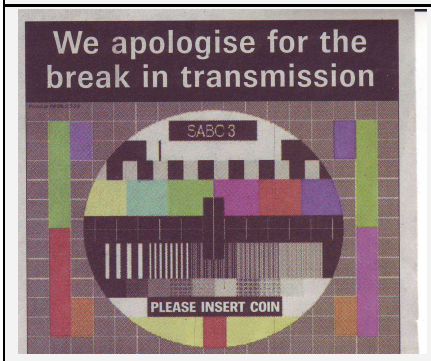
Sources; Road Traffic Mmanagement Corp (RTMC 2006 – last report published, Automobile Association, Insurance Companies.

No 19. The Joke Column.

Warning / Disclaimer.

Sensitive readers are warned that the following may erroneously be taken to contain sex, violence, strong language, gender, race, ethics etc. Readers are warned not to read or have any of the following read to them. Recommended readers age is limited to 120 and 121 years of age. A further requirement is you must have a sense of humour.

With the SABC running at a R1 billion Rand loss the picture below may indicate the future!



Someone who has had problems with the SABC Licence department in accepting the death of the licence holder eventually gave up and sent them a further updated address and then placed a letterbox on the grave in the cemetery. *(True story from C Stevenson Cape Town).*

Then there is the guy who paid his TV licence by sending in last years processed cheque as a rerun, because he claimed they were only showing reruns!

In Toronto Canada a truck driver has been fined $290 for smoking in his truck because it's classed as his workplace. The lady cop who issued the fine said he broke the Smoke Free Ontario Act, which prohibits smoking in an enclosed workplace or enclosed public areas and that extended to work vehicles according to her!
(And we think SA is bad)!

Your thumb is the same length as your nose!?!

Notice on a swimming pool.
Welcome to our ool
(Note there's no P in it)
Lets keep it that way!

Three old guys are out walking.
First one says, "Windy, isn't it?"
Second one says,"No, its Thursday!"
Third one says, So am I. Let's go get a beer!"

How many South African politicians does it take to change a light bulb?
One – to hold the bulb steady while the world revolves around him/her!

A politician is sitting at his campaign headquarters when the phone rings.
He listens and his face brightens. When he puts the phone down he phones his mother.
"Ma," he says, "the results are in – I won the election!"
"Honestly" exclaims his mother.
The politicians smile fades away and he says, " Ma, why bring that up at a time like this?"

A woman doing her Xmas shopping walks up to the manager of the store and asks; "Are you hiring any help?"
"No," he says rather smugly. "We already have all the staff we need".
"Good," she says. "Then would you get someone to serve me!?"

Lady goes to the Post Office to buy stamps for her Xmas cards.
"What denomination stamps?" asks the clerk.
"Oh goodness – have we come to this political correctness", says the lady.
"Well give me 20 Catholic and 20 Baptist ones!"

In court the judge asks the little boy; "Would you like to live with your father?"
"No," says the little boy. " He beats me."
So the judge says, Will you live with your mother?"
"No, she beats me all the time," says the child.
"So who would you like to live with," asks the judge.
"With Bafana Bafana, says the boy, they never beat anybody!"

Satan visits Cape Town and meets Gatiep.
"Do you know who I am?"
"Nay," says Gatiep, "Giemy a hint."
Satan says, " I am the prince of darkness."
"Aaah," says Gatiep, " Jy's mos die CEO van Eskom."

We know about the December ghosts of Xmas Past, Present and Future.
What do ghosts do at January sales?
They go bargain haunting!

The following column may become a regular feature in the future.
It is hoped to publish useful technical and other information from time to time, which can be cut out and stored in your own information file. Start your collection now!
Editor.

No 20. For Your File Only!

The Digital Versatile Disc / Digital Video Disc.
General Information.

The DVD is an optical disc storage media format which was founded in 1995. Its main uses are video and data storage. DVDs are of the same dimensions as compact discs (CDs), but store more than six times as much data.

Variations of the term *DVD* usually describe the way data is stored on the discs: DVD-ROM (read only memory) has data that can only be read and not written; DVD-R and DVD+R (recordable) can record data only once, and then function as a DVD-ROM; DVD-RW (re-writable), DVD+RW, and DVD-RAM (random access memory) can both record and erase data multiple times. The wavelength used by standard DVD lasers is 650 nm which is a red colour.

DVD-Video and DVD-Audio discs refer to properly formatted and structured video and audio content, respectively. Other types of DVDs, including those with video content, may be referred to as DVD Data discs.

A Little History.

Wary of being caught in a repeat of the costly video tape format war between VHS and Betamax in the 1980s, a group of computer industry experts, formed a Technical Working Group, or TWG. The TWG voted to boycott the then competing DVD formats in favour of a single, converged standard. The president of IBM, was recruited to apply pressure on the executives of the warring factions. The computer companies won the day, and a single format, now called DVD, was agreed upon. The TWG also collaborated with the Optical Storage Technology Association (OSTA) on the use of their implementation of the ISO-13346 file system (known as the Universal Disk Format [UDF]) for use on the new DVDs.

EFMPlus was chosen due to its resilience against disc damage, such as scratches and fingerprints. EFMPlus is 6% less efficient than the modulation technique originally used by Toshiba, which resulted in a capacity of 4.7 GB, as opposed to the original 5 GB. The result was the DVD specification, finalized for the DVD movie player and DVD-ROM computer applications in December 1995. The DVD Video format was first introduced by Toshiba in Japan in November 1996, in the United States in March 1997 (test marketed), in Europe in November 1998, and in Australia in March 1999. In May 1997, the DVD Consortium was replaced by the DVD Forum, which is open to all other companies.

The DVD specifications created and updated by DVD Forum are published as so-called *DVD Books* (e.g. DVD-ROM Book, DVD-Audio Book, DVD-Video Book, DVD-R Book, DVD-RW Book, DVD-RAM Book, DVD-AR Book, DVD-VR Book, etc). Some specifications for mechanical, physical and optical characteristics of DVD optical disks can be downloaded as *freely available standards* from ISO website. There is also DVD+RW Alliance, which publish competing DVD specifications such as DVD+R, DVD+R DL, DVD+RW or DVD+RW DL. These DVD formats are also ISO standards. Some of DVD specifications (e.g. for DVD-Video) are not publicly available and can be obtained only from DVD Format/Logo Licensing Corporation for a fee. Every subscriber must sign a non-disclosure agreement as certain information in the DVD Book is proprietary and confidential.

Some Technical Information.

Media type	Optical disc
Capacity	~4.7 GB (single-sided, single-layer) ~8.54 GB (single-sided, double-layer) ~9.4 GB (double-sided, single-layer) ~17.08 GB (rare—double-sided, double-layer)
Read mechanism	650 nm laser, 10.5 Mbit/s (1×)
Write mechanism	10.5 Mbit/s (1×)
Standard	DVD Forum's DVD Books[1][2][3] and DVD+RW Alliance specifications
Usage	Data storage, video, audio, Xbox, PlayStation 2, Wii, Xbox 360 games

The basic types of DVD (12 cm diameter, single-sided or homogenous double-sided) are referred to by a rough approximation of their capacity in gigabytes. In draft versions of the specification, DVD-5 indeed held five gigabytes, but some parameters were changed later on as explained above, so the capacity decreased. Other formats, those with 8 cm diameter and hybrid variants,

acquired similar numeric names with even larger deviation.
The 12 cm type is a standard DVD, and the 8 cm variety is known as a MiniDVD. These are the same sizes as a standard CD and a mini-CD, respectively. The capacity by surface (MiB/cm^2) varies from 6.92 MiB/cm^2 in the DVD-1 to 18.0 MiB/cm^2 in the DVD-18.
As with hard disk drives, gigabyte and the symbol GB are usually used in the SI sense (i.e., 10^9, or 1,000,000,000 bytes). For distinction, gigabyte (with symbol GiB) is used (i.e., 2^{30}, or 1,073,741,824 bytes). Most computer operating systems display file sizes in gigabytes, megabyte, and kilobyte, respectively.

Each DVD sector contains 2,418 bytes of data, 2,048 bytes of which are user data. There is a small difference in storage space between + and - (hyphen) formats:

DVD uses 650 nm wavelength laser diode light as opposed to 780 nm for CD. This permits a smaller pit to be etched on the media surface compared to CDs (0.74 µm for DVD versus 1.6 µm for CD), allowing for a DVD's increased storage capacity.
In comparison, Blu-ray, the successor to the DVD format, uses a wavelength of 405 nm, and one dual-layer disc has a 50 GB storage capacity.
Writing speeds for DVD were 1×, that is, 1350 kB/s/s , in the first drives. Recent models, at 18× or 20×, have 18 or 20 times that speed. Note that for CD drives, 1× means 153.6 kB/s, approximately 9 times slower

Some Formats and Types of DVD.
DVD recordable and rewritable
DVD recordable.
These were initially developed from the need to store data for backup and transport.
DVD recordables are now also used for consumer audio and video recording. Three formats were developed: DVD-R-RW, DVD+R/RW, and DVD-RAM.

Dual-layer recording
Dual-layer recording allows DVD-R and DVD+R discs to store significantly more data—up to 8.54 gigabytes per disc, compared with 4.7 gigabytes for single-layer discs. Along with this, DVD-DL's have slower write speeds as compared to ordinary DVD's and when played on a DVD player, a slight transition can be seen between the layers. DVD-R DL was developed for the DVD Forum by Pioneer Corporation; DVD +R DL was developed for the DVD+RW Alliance by Philips and Mitsubishi Kagaku Media (MKM).
A dual-layer disc differs from its usual DVD counterpart by employing a second physical layer within the disc itself. The drive with dual-layer capability accesses the second layer by shining the laser through the first semitransparent layer. In some DVD players, the layer change can exhibit a noticeable pause, up to several seconds. This caused some viewers to worry that their dual-layer discs were damaged or defective, with the end result that studios began listing a standard message explaining the dual-layer pausing effect on all dual-layer disc packaging.
DVD recordable discs supporting this technology are backward-compatible with some existing DVD players and DVD-ROM drives. Many current DVD recorders support dual-layer technology, and the price is now comparable to that of single-layer drives, although the blank media remain more expensive. The recording speeds reached by dual-layer media are still well below those of single-layer media.
There are two modes for dual-layer orientation. With *Parallel Track Path* (PTP), used on DVD-ROM, both layers start at the inside diameter (ID) and end at the outside diameter (OD) with the lead-out. With Opposite Track Path (OTP), used on many DVD Video discs, the lower layer starts at the ID and the upper layer starts at the OD, where the other layer ends; they share one lead-in and one lead-out. However, some DVD Video discs also use a parallel track, such as those authored episodically, as in a disc with several separate episodes of a TV series—where more often than not, the layer change is in-between titles and therefore would not need to be authored in the opposite track path fashion.[1]
DVD Video
DVD Video is a standard for content on DVD media. In the U.S., mass retailer sales of DVD Video titles and players began in August 1997. By June 2003, weekly DVD Video rentals began outnumbering weekly VHS cassette rentals, reflecting the rapid adoption rate of the technology in the U.S. marketplace. Currently, DVD Video is the dominant form of home video distribution worldwide.
Although many resolutions and formats are supported, most consumer DVD Video discs use either 4:3 or so called anamorhic 16:9 aspect ratio MPEG-2 video, stored at a resolution of 720×480 (NTSC) or 720×576 (PAL) at 29.97, 25, or 23.976 FPS. Audio is commonly stored using the Dolby Digital (AC-3) or Digital Theatre System (DTS) formats, ranging from 16-bits/48 kHz to 24-bits/96 kHz format with monoaural to 7.1-channel "Surround Sound" presentation, and/or MPEG 1 Layer 2. Although the specifications for video and audio requirements vary by global region and television system, many DVD players support all possible formats. DVD Video also supports features such as menus, selectable subtitles, multiple camera angles, and multiple audio tracks.

DVD Audio

DVD Audio is a format for delivering high fidelity audio content on a DVD. It offers many channel configuration options (from mono to 7.1 surround sound) at various sampling frequencies (up to 24-bits/192 kHz versus CDDA's's 16-bits/44.1 kHz). Compared with the CD format, the much higher-capacity DVD format enables the inclusion of considerably more music (with respect to total running time and quantity of songs) and/or far higher audio quality (reflected by higher sampling rates and greater sample resolution, and/or additional channels for spatial sound reproduction).

Despite DVD Audio's superior technical specifications, there is debate as to whether the resulting audio enhancements are distinguishable in typical listening environments. DVD Audio currently forms a niche market, probably due to the very sort of format war with rival standard SACD that DVD Video avoided.

Content Protection.

DVD Audio discs employ a DRM mechanism, called Content Protection for Prerecorded Media (CPPM), developed by the 4C group (IBM, Intel, Matsushita, and Toshiba).

To date, CPPM has not been "broken", in the sense that DVD Video's CSS has been broken, but ways to circumvent it have been developed. By modifying commercial DVD (Audio) playback software to write the decrypted and decoded audio streams to the hard disk, users can essentially extract content from DVD Audio discs much in the same way they can from DVD Video discs.

DVD as an archival medium

There are two considerations for an archival medium: obsolescence and durability. If there is no device that can read the medium, it is obsolete and the data is unavailable and thus lost.

Durability of DVDs is measured by how long the data may be read from the disc, assuming compatible devices exist that can read it: that is, how long the disc can be stored until data is lost. Five factors affect durability: sealing method, reflective layer, organic dye makeup, where it was manufactured, and storage practices.

According to the Optical Storage Technology Association (OSTA), "manufacturers claim life spans ranging from 30 to 100 years for DVD, DVD-R and DVD+R discs and up to 30 years for DVD-RW, DVD+RW and DVD-RAM", although a manufacturer of 24-karat gold-based DVDs claims lifespans of up to 300 years. There are however numerous reports that DVD's, both those recorded at home and commercially sold, are unreadable after only a few years. This due to poorly made DVD's, print on the DVD and covers eroding the DVD surface as well as poor storage conditions.

Some further technical information.

DVD Region Codes.

Did you know that not all DVD's play in all DVD Players? Well with DVD's worldwide success as a medium comes a little secret known as region coding or region lock. The DVD world is divided up into six major regions with two additional regions reserved for special use.

This means DVD's and DVD players are labelled for operation within a specified geographical region. This means DVD's sold in one country may not work with DVD's from another country. The DVD's are encoded for a specific region.

The regions are;

1. USA & Canada
2. Japan, Europe, South Africa, Middle East, Greenland.
3. South Korea, Taiwan, Hong Kong, Parts of South East Asia.
4. Australia, New Zealand, Latin America, Mexico.
5. Eastern Europe, Russia, India, Africa.
6. China.
7. Reserved for unspecified special use.
8. Reserved for Cruise ships, Airlines etc.
0. Region All. Discs are uncoded and can be played worldwide, except however that PAL discs must be played on PAL compatible units and NSTC discs on a NTSC compatible unit.

The world is also divided into the NTSC and PAL video systems, so the Consumer may need a multi-system TV to access DVDs pressed in one of these systems. Many consumers in Europe and some other parts of the world do own Televisions that can view DVDs pressed in either NTSC or PAL. South Africa uses PAL.

The Reason for coding?

This coding is a tool to protect copyright and film distribution rights. Movies are released in theatres in different parts of the world at different times. This means you cannot get a friend in the USA to send you a copy, as it won't play here.

This is good for the movie industry in that it gets maximum profits from theatrical releases followed by disc releases. The other secret however is that the industry can fix prices of the DVD's in various regions. So a disc with the same program may cost a lot less in one country than in another.

Now you know why there is an abundant market for Code Free DVD players. These units have been modified so the coding function has been disabled. These are available but may be considered as not totally legal. For the lucky few owners DVD's can be bought from any region and played.

However, Hollywood has put in place another layer of coding called RCE (Regional Coding Enhancement), which prevents selected region 1 DVD, s from playing on Code Free Players. (This generally only on Region 1 discs).

Home DVD Recording.

With the advent of DVD Recorders and DVD Camcorders for consumer use, the question comes up as to how this is affected by DVD Region Coding. The good news is that since DVD Region Coding is a commercial application, any DVD recordings you make on a consumer-based DVD recorder, DVD camcorder, or even a PC, are not Region Coded. If the DVD you record made in the NTSC video system, it will be playable on DVD players in countries that use that system, and the same for PAL; their is no further restriction on home recorded DVD's.

Video Copy Protection.

Many commercially made VHS tapes cannot easily be copied due to Macrovision anti copy encoding. This also applies to making copies of DVD's. DVD recorders cannot bypass anti-copy signals and will probably display a message that it detects anti-copy code or an unusable signal.

A DVD recorder receiving a data stream encoded with Macrovision's legacy analog copy protection (ACP) signal will simply display a message saying the source is "copy-protected", and will pause the recording. This is achieved through a signal implanted within the offscreen range in the vertical blanking interval of the video signal—either physically recorded directly on the tape (as with VHS) or created on playback by a chip in the player (as with DVDs) or the digital cable/satellite box. Video formats store the video signal as “lines.” A portion of these lines are used for constructing the visible image by transposing them on the screen, but there are approximately 20 to 40 lines outside the visible range that are used for different things in different countries. Macrovision inserts pulses into this non-displayed area. These signals cause the automatic gain control on the recording VCR to compensate for the varying strength. This makes the recorded picture wildly change brightness, rendering it unwatchable. On most televisions, the viewer on the screen sees no effect in ordinary playback of the modified video because the signal is outside the visible area, but some TV sets do not properly blank the vertical retrace and leave dotted white lines near the top of the picture. Some newer TVs also mistake the Macrovision pulses for synchronization pulses. Another modification also used in Macrovision is the addition of colour stripes—rapidly modulated colorburst signals.

Some DVD recorders mistake the mechanical instability of worn videotapes for Macrovision signals, and so refuse to make what would be perfectly legal DVD dubs of people's old home movies and the like. This widespread problem provides a legitimate basis for the sale of devices that defeat Macrovision. The signal has also been known to confuse home theater line doublers (devices for improving the quality of video for large projection TVs) and some high-end television comb filters.

Some DVD players give the user the option of disabling the Macrovision technology. This is possible since the signal is not stored on the DVD itself; instead commercial DVDs contain an instruction to the player to create such a signal during playback. Some DVD players can be configured to ignore such instructions.

There are also devices called *stabilizers*, *video stabilizers* or *enhancers* available that filter out the Macrovision spikes and thereby defeat the system. The principle of their function lies in detecting the vertical synchronization signal, and forcing the lines occurring during the vertical blanking interval to black level, removing the AGC-confusing pulses. The best device for defeating Macrovision is a Time Base Corrector (TBC), although they are more expensive than the simpler video stabilizers.

Discs made with DVD copying programs such as DVD Shrink automatically disable any Macrovision copy protection. USB-based video interfaces designed to allow DVD recording on PCs are legally required to detect the presence of Macrovision signals on any analog signals input to them, and if so, inhibit the recording.

This article on digital video etc and developments will be continued in a future Newsletter.

Sources: Wikepidea, many websites on the Internet & Manufactureres information brochures & adverts.

May 2010 bring Tolerance, Peace, Goodwill and Blessings to all on Spaceship Earth!

No 21.
Unsubscribe Option.

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To unsubscribe send an email with **""IPET unsubscribe**"" in the text to engineer@netactive.co.za

Number 22. O. & O. E.

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No 23. See the attached file for ECSA's CPD Form

Number 24. Update Form.

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Your signature that info is correct	**Race for Statistical Purposes only (Government keeps asking)!**	**Date**

No 25.

The Erect IPET Conference Bag.

Compact and light when not in use, these useful expandable bags are approx. 370 X 280 X 85mm. Features include an expandable bottom; two zips compartments in front, a Velcro pocket, which can also be used for a Cell Phone, a number of unzipped pockets and an adjustable strap, which can convert the bag into a backpack. Made of a durable strong canvas material it comes with a carrying handle as well as a shoulder strap. Takes A4 size paper in the main front, rear and central pockets.

Selling price is R120 per bag plus Packing and Postage at R 50 including delivery by Insured Mail.
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Please supply _____ (Quantity) of Conference Bags

Cheque to value of R_____(attached).

Send to (Name)_____(Phone No)_____

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