



Southern Cape Centre

SOUTHERN CAPERS

Greetings, and welcome to this June 2013 issue of the Southern Capers

The main event during this past quarter was undoubtedly the Presidential Address on 16th April. It was indeed a pleasure to welcome our president to the Southern Cape Centre, and hear his presentation entitled "Independent Power Production and Infrastructure Development".

While this central theme was very well received, of equal importance was his discussion on the role of the SAIEE, and the contribution it can make to the industry. The mentoring of students was particularly emphasised, as students desperately need some assistance from experienced engineers.

Another service to members is the provision of opportunities for registered engineers to comply with the CPD requirements. You will find some interesting reading in Alton Lock's article later in this newsletter.

In the last issue Robbie gave his report on the Cape Argus race, and he subsequently challenged me to report on my athletic activities. Well, the Masters Athletics Association held the

annual national championships in Oudtshoorn this year, and I entered three track events, 10 000 m, 5 000 m and 1 500 m in the Mens 70+ age category, and scooped three gold medals! Now I am looking forward to the 21 km Knysna Forest race on the 6th July, and hope to finish in under 2 hours. It is rather humbling, when the leaders come in well under 1h15! Yes, the older I get, the faster I used to be!

Let me finish with a thought-provoking quotation: "The budget should be balanced, the treasury should be refilled, public debt controlled, and assistance to foreign lands should be curtailed, lest we become bankrupt. People must again learn to work instead of living on public assistance." No, this is not from the current budget debate, but from Cicero, 55BC.

Please remember that your news, comments and contributions to this newsletter will always be welcomed at leszelia@iafrica.com.

Les

Internet Delivery in “White Spaces”

White spaces are the vacant gaps in the RF spectrum between broadcast television channels in particular areas, and research is being conducted into the feasibility of exploiting these spaces for wireless broadband access to the consumers, at prices dramatically lower than those for the usual mobile networks.

Google and Microsoft are backing pilot projects in a number of countries, and while the broadcasters generally oppose the idea for fear of interference problems, the proponents claim that none has been encountered to date.

Use of this technology offers the possibility of wide coverage at low cost. Probably the greatest challenge to its introduction is the fact that policymakers

and regulators regard spectrum as a revenue generator. With the government’s stated objective of providing universal broadband access by 2020, it will be interesting to see to what degree white spaces will contribute to its achievement.

Meanwhile, implementation may be impeded by the continuing delay in conversion of the television networks from analogue to digital. Following etv’s successful court challenge on government’s decision that Sentech would manage the digital encryption system, Minister Dina Pule has now decided to review the policy on set-top box control, and possibly even ditch the control system. Watch this space!

Continuing Professional Development (CPD)

Overview

In terms of the ECSA regulations all registered persons of that body have to renew their registration at five yearly intervals. This renewal process inter-alia requires the accumulation of CPD points during the intervening five year period to ensure that the person remains abreast of technological developments and advancements in their field of expertise and also pursues continual personal professional development. These points have to be accumulated in at least two of the three of the following prescribed categories:-

- **Category 1: Developmental Activities:**
Covers attendance at relevant accredited training courses, technical lectures and related activities (Maximum of 4 points or credits per year).
- **Category 2: Work-based Activities:**
For example, experiential development while performing professional tasks including mentoring activities (Maximum of 2 points or credits per year

for work related activities and 1 further point/year should mentoring be undertaken).

- **Category 3: Individual Activities:**
Personal development by exposure to relevant educational activities, professional bodies, contributions to technical education and/or literature and keeping abreast of technical developments etc. (1 point or credit per year for membership of an accredited voluntary professional body plus a maximum of 3 further points per year in relation to other appropriate activities).

The number of points that need to be accumulated are at least five per annum in aggregate with a minimum of three in any specific year while the total number to be accumulated in the five year period being a minimum of twenty five of which at least five must be category 1 points.

There is an exception to this requirement in respect of persons of fifty-five years and older who have re-categorised their registration to retired status and formally

transferred to the retired persons register. In such an event those who are no longer actively engaged in the profession are then no longer required to accumulate points to retain their registration as they are then seen as being retired.

However should they continue to undertake engineering work on a part-time basis not exceeding thirty hours monthly and three hundred hours annually they will then be required to accumulate a lesser number of points in aggregate/year and total over a five year period and renew their registration on that basis at five yearly intervals. Furthermore should this engineering work load ever exceed the abovementioned specified limit they would then be required to revert to normal registration status and meet the standard rotational re-registration requirements.

A further exception exists in respect of persons registered under the candidate category.

The above brief overview must not be seen as comprehensive or definitive description of requirements and anyone needing comprehensive information in this regard should visit the ECSA website (www.ecsa.co.za) and follow the CPD/Rules link and to download all the relevant details.

Southern Cape Centre Role

It is evident that the majority of the members of the Southern Cape Centre fall within the ambit of the retired category mentioned above and consequently the demand for CPD credits amongst our membership is limited.

We nevertheless have to also ensure that the needs of the active members are also properly served and have consequently adopted the following practices for ensuring that the needs of those members requiring ongoing exposure to development are also met:-

– Event Validation

All appropriate events held by the Centre are pre-validated through the SAIEE Head-Office with ECSA and

assigned an appropriate Category 1 points rating and validation number in advance of the event. This then enables any attendees who wish to accumulate points to claim the relevant credit awarded for attendance subject to them completing the register which is provided for the purpose. These registers are then kept in the archives and held available for review and audit at ECSA's discretion.

– Hosting Development Courses

The Centre will also arrange Category 1 CPD Development courses where a need is identified and there is sufficient interest to warrant the holding of such events. Unfortunately in the recent past insufficient demand for such courses have been identified notwithstanding extensive canvassing and surveying of the member and possible wider professional interest base in our area on a number of occasions and consequently it was not possible to proceed with the provision of same.

As a result it has now been decided to pass the initiative for the holding of such events to the membership who are requested to communicate any needs they may have identified in this regard whom they believe to be viable to the committee for consideration.

In this regard it must be noted that because of the potential costs involved in hosting such events minimum attendance figures of at least twelve or possibly more persons will be necessary before it could be considered.

The subject matter covered in such courses can be any of those currently offered by the SAIEE or any alternatives where enough potential interest exists and contact details of possible presenters can be provided. In the latter alternative it is also necessary to ensure that the requested course has the necessary ECSA validation endorsement before submitting it for consideration.

Alton Lock

Global Climate Change

The 22nd of April marked the worldwide launch of the latest global warming documentary film, with 3 000 screenings at selected venues across the world on Earth Day. The film entitled “Thin Ice” was introduced by local academics at the NMMU lecture theatre in George, and was followed by a live streaming of further

scientific discussion on climate change, featuring international experts in various disciplines.

This initiative is a timely reminder of more than just “an inconvenient truth” and members are encouraged to view it if the opportunity arises.

CPV Plant for SA

Soitec, a world leader in electricity generation and electronics development, has finalised a 100m US dollar bond to finance the construction of a 44 MWp concentrator photovoltaic (CPV) solar power plant in Touwsrivier.

Group Five has already commenced construction on the site, and when completed in June 2014, it will be the largest CPV plant in the western world.

Tsitsikama Wind Farm

Following the recent documentation of the intention to erect a 132kV line to link the wind farm output to the Eastern Cape electricity grid, there has recently been the announcement of a R66m contract for 60 pad-mounted transformer kiosks for

the 138 MW Jeffreys Bay wind farm awarded to MV Switchgear Actom, by Consolidated Power Projects (CONCO).

Hopefully we will have the opportunity to visit this facility once completed.

All systems go, say MeerKAT project leaders

(Extract from SKA eNews – www.skatelescope.org)

The South African SKA site in the Karoo is currently a hub of construction activity, and plans are on track to deliver the 64 MeerKAT antennas by the end of 2016, says MeerKAT project manager, Willem Esterhuysen. “Antenna 1 will be installed by December 2013.”

“The project team is motivated to build the best telescope we can,” he said. (MeerKAT is one of the SKA precursor telescopes). “We are confident that we will build it to budget, and on schedule, while exceeding the original specifications.”

The work being done by the MeerKAT team is providing strong momentum to integrate MeerKAT into SKA Phase 1. Discussions about this integration are in progress between SKA SA and the International SKA project.

Various subsystems of MeerKAT are at the requirements review, or preliminary design review, stages. The full qualification, and critical design review, is expected to be completed early in 2014.

“Until the SKA is completed, MeerKAT will be the most sensitive radio interferometer

in the world in the L-Band,” Esterhuyse explains. He noted that his team has been able to increase the sensitivity of its offset Gregorian dish design from 220 m²/K to 300 m²/K by using system and value engineering processes, without increasing overall cost. “This constitutes a 36% improvement in sensitivity, and an 86% improvement in survey speed, compared to the initial specifications!”

Infrastructure update

The upgrade to the Karoo substation in Carnarvon was completed and handed over to Eskom in December 2012.

By mid-April 2013 the roads and civil works, as well as the electrical and fibre ducting reticulation for MeerKAT should be completed. At the same time construction teams are busy with extensions to the dish assembly shed, as well as the pedestal integration shed, Karoo Array processor building and on-site power facility.



New workshops, stores and offices taking shape at Klerefontein near Carnarvon



Karoo Array Processor building and on-site power facility under construction