'GRACE'

FEBRUARY EDITION

CONTENT

COMMANDANT'S MESSAGE

As the commandant of the School of Signals, I consider it a great honour and privilege to write this message for the School of Signals' monthly magazine. To begin, I want to express my gratitude to all of the commandants who have strived and overcome so many obstacles to bring our institute up to current standards. In addition, I'd like to take this opportunity to express my deepest gratitude to all the Signal Officers and Other Ranks who gave their lives in defence of the homeland, as well as those who were permanently injured during the conflict.

Meanwhile, the School of Signals has provided excellent service throughout in grooming competent and skilled Officers and Other Ranks for communication tasks in the Army. In accordance with the Army Way Forward Strategy 2020-2025, the School of Signals has just begun a Diploma in Information Technology Course for other arms officers, which has become a watershed moment for the school.

Simultaneously, The School of Signals updated the course curriculum for all courses and included new modules to reflect the most recent developments in the field of information and communications technology. Introducing a new chapter to the School of Signals by publishing a monthly magazine is critical at this time for young officers to look beyond their limitations and to develop as good writers and readers before being deployed in the field. With that goal in mind, this notion was brought to the Young Officer's course, and we hope that they will do everything possible to make it a standard document. Finally, as Commandant of the School of Signals, I'd like to express my warmest congratulations on the Young Officers Course No 18.
Thank you very much.

Col BD Fernando USP psc

CHIEF INSTRUCTOR'S MESSAGE

I consider a great privilege bestowed upon me as customary in the School of Signal to pen this message for the monthly magazine of School of Signals. Nature of the warfare has change and the war fighting modes are shifted from physical to remote means information technology and communication has become the 5th generation of warfare , threats are equally emerging from state and non-state actors, imposing more and more challenges on state. There fore as the signalers we have to update and develop the knowledge on modern soldiers.

By theory and practically execution of the theory it enhance the capabilities of the signalers. For that School of Signals which is the most suitable and best place to give that knowledge for Sri Lankan Army. Sri Lanka Army has confidence that our soldiers can gain that experience and knowledge form School of Signals.

It is my firm belief that we have entered a modern digital era which all knowledgeable and capable signalers should joint hands to serve with our best efficiency and keeping with overwhelming transformation in the communication and computer field due to rapid development of the technology and also instantly and correctly identifying spectrum of network to assist the national service digital grids.

Maj HMGIUB Herath USP psc

VISION

Develop professionally qualified Officers and Other Ranks of Sri Lanka Army to meet Communication, Computer, Information and Cyber Space challenges during the War and Peace.

MISSION

Conduct technical and tactical training required for Officers and Soldiers at different levels to enhance their skills and knowledge in order to accomplish Communication, Computer, Information and Cyber Space assignment professionally.

HISTORY

In 1964, Signal Training Squadron was formed under the 1st Regiment of Sri Lanka Signal Corps at Panagoda. The Squadron was elevated to a School of Signals in 1991 under the Regimental Centre Sri Lanka Signal Corps. Kandy, a world heritage city was selected the ideal place to establish the School on 15th July 1991. With the rapid expansion of the Sri Lanka Army, the School of Signals too expanded and undertook to conduct a wide range of training courses pertaining to signals and several other courses as well. Since then, keeping to the moto 'Technological Sound', the School of Signals has been maintaining high standard of training. The School of Signals fulfilled its duties at its best as a training institute not only conducting training programmes for the signalers and the Army personnel on signal duties but also conducting various courses for officers and other rankers from the tri-forces, and computer courses for children of soldiers killed, missing and wounded in action and of those who retired and still in service.

COMMEMORATION OF THE 74TH INDEPENDENCE

The Commemoration of the 74th Independence day was organized as per the directives given by the Army Headquarters with complete adherence to the covid 19 principles.

The program consisted with the hoisting of the National flag followed by a troop address by the Commandant on significance of independence and there after planting of 200 tree plants.
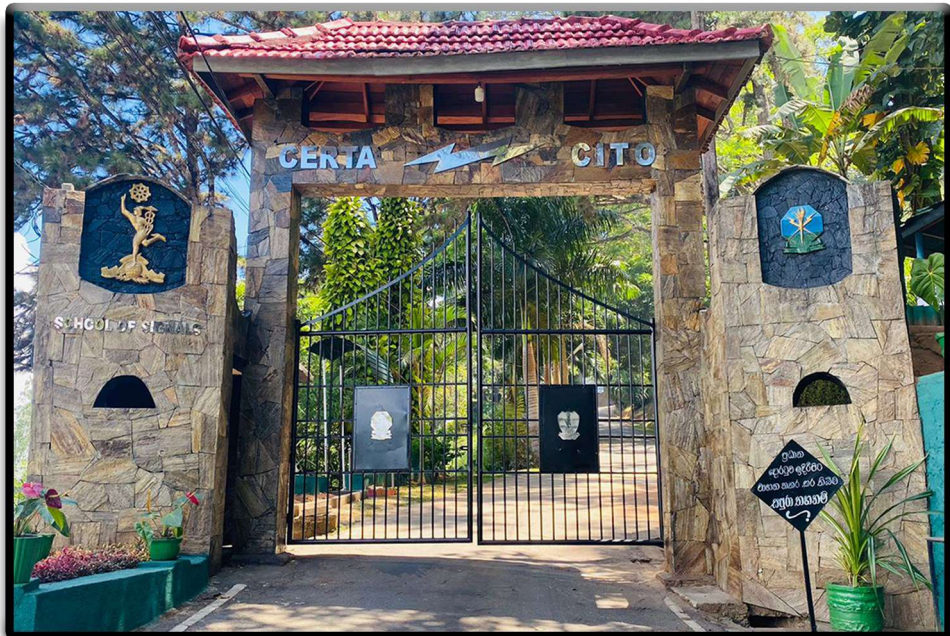
ABOUT
SCHOOL OF SIGNALS

As a training school, various courses are conducted in accordance with the annual training plan for the training of Officers and Other Ranks of the Corps of Signals as well as all ranks of the Army, giving priority to courses and academic activities. Presently there are few ongoing courses such as Diploma in Information Communiation Technology Course, Signal Young Officers Course, Class 1 Course, CCTV Course and Operator Wireman Lineman Course.

In addition to the training provided by the School to military personnel, leadership training, team spirit and positive attitudes were developed through the school student practical training.

ONGOING COURSES

DIPLOMA IN INFORMATION COMMUNICATION TECHNOLOGY

According to "Way Forward Strategy 2020-2025," the School of Signals has reexamined the existing curriculum and created Telecommunication and Information Technology courses with National Vocational Qualifications in partnership with the Tertiary and Vocational Education Commission. It was previously intended to begin on February 7th, 2022, with the consent of ARTRAC and the Directorate of Training. As a result, on February 7th, 2022, the School of Signals hosted an inauguration ceremony for the Diploma in Information Communication Technology Course.

The Colonel Commandant of Sri Lanka Signal Corps and the Chief Signal Officer of Sri Lanka Army Maj General PAJ Peiris ndu graced the inauguration ceremony as the Chief Guest and the Chairman of the Tertiary and Vocational Education Commission, Engineer Udeni Wickramasinghe was also present at the ceremony as the Guest of Honour.

ONGOING COURSES

SIGNAL YOUNG OFFICERS' COURSE NO 18

Advanced Certificate in Applied Modern Information and Communication Technology for Signal Young Officers (ACAMICT – Sig YO No 18) is specially designed for Young Signal Officers to provide wide knowledge on signal communication including theoretical and practical aspects which enable them to perform their signal duties as a Signal Officer in the field formations.

The aim of this course is to train and develop Signal Young Officers professionally on information and communication technology while grooming them with proper regimentation in order to employ them in the field as the formation Signal Officer and junior communication/ staff officers to the field commanders.

SPECIAL MOMENTS OF
COURSES

SPECIAL EVENTS

CRICKET TOURNAMENT

A cricket tournament organized by the School of Signals was held on 16th February 2022 at the school grounds. The event was organized under the guidance of the Commandant Colonel BD Fernando USP psc with the aim of developing cooperation among the students of various courses being conducted at the school.

Six teams participated the event representing the Advanced Certificate in Applied Modern Information and Communication Technology for Signal Young Officers, Diploma in Information Communication Technology, Certificate Course in Information and Communication Technology (Class 1) and the permanent staff of the School of Signals.

Signal Young Officers and the Class 1 students battled for the final trophy where the Signal Young Officers triumphed the trophy by 21 runs.

SPECIAL EVENTS

BODHI POOJA

A Darma Desana was organized in the School of Signals temple grounds on the advice of the Commandant School of Signals in honor of Navam Poya Day, which fell on February 16, 2022.

To close out their religious program, Maha Sanga asked blessings for a prosperous new year, blessings for military heroes who have become differently-able, and transferred merits to those who have died while serving.

Priests who performed the pooja were also able to bless all those who were suffering as a result of COVID 19.

Religious activities on Poya Day were held in accordance with the COVID 19 regulations. All Senior Officers and Other Rankers students attended to the function.

DEVELOPMENTS

RENOVATION OF STUDENT OFFICERS' CLASSROOM

A fully-fledged classroom facility was provided for Student Officers of Signal Young Officers' Course – No 18 by renovating an office space previously used as a workshop. This classroom consists of technological facilities such as Multimedia, Public Address System and is fully furnished.

LAUNCHING LEARNING MANAGEMENT SYSTEM

The Colonel Commandant launched the newly developed Learning Management System (LMS) at the invitation of the Commandant School of Signals on 7th February 2022. Now the students can access the course content through the LMS and all exams and submissions are done using the LMS.

The LMS consists of an e-library, course management, assessment management, course materials, online examinations, and a training calendar.

MIRROR
WALL

USE OF ARTIFICIAL INTELLIGENCE IN LIFESTYLE

Artificial Intelligence has a lot of influence on our lifestyle. Let us discuss a few of them.
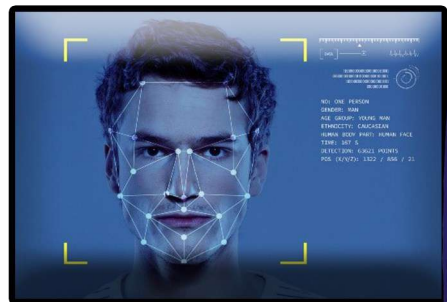
Autonomous Vehicles Toyota, Audi, Volvo, and Tesla use machine learning to educate computers to think and evolve like humans when it comes to driving in any environment and object detection to minimize accidents.

Spam Filters Spam emails are sent to spam or trash folders, and we only see the filtered content in the email we use on a daily basis. Gmail,a popular email service, has a filtration capacity of around 99.9 percent.

Facial Recognition Face filters are used in our favorite devices, including smartphones, laptops, and desktops, to detect and identify people using facial recognition. Aside from personal use, facial recognition is a widely used AI application across a wide range of businesses, even those with severe security concerns.

Capt WPTH Pathirana

PATH FORWARDED FOR MILITARY USAGE

The Military cannot ignore this technology. because if some party ignore this technology certainly our opponents will, and we must be able to attack and defeat their AI. Currently AI In a situation to play role in future military applications. It has many application areas where it will enhance productivity, reduce man workload, and operate more quickly than humans.

Multiple work can do together. but there are number of ulnerable application in the Artificial intelligence.AI systems in contested domains and making them responsible for critical decisions opens the opportunity for disastrous results. At this time, humans must remain responsible for key decisions.The best areas to invest in military AI are those that operate in uncontested domains.in the military we required accuracy in a very high level. AI is solution for the high accuracy. Examples of such systems are medical-imaging diagnostic tools, maintenance-failure prediction applications, and fraud-detection programs. All of these can provide value to the military while limiting the risk from adversarial attacks, biased data, context misunderstanding, and more. Other one of military aspect is security. This factor also can be achieved from artificial-intelligence. Tools that are closely supervised by human experts or that have secure inputs and outputs can provide value to the military while alleviating concerns about vulnerabilities. Above applications are not for the commercial purposes objectives. Those AI projects will help to Military to have success in the near term

2/Lt HPAD Herath

WHAT IS THE CURRENT STATE OF AI?

Artificial intelligence technologies are transforming business processes and society at large. What are the AI trends in 2022 that enterprises should be paying attention to?
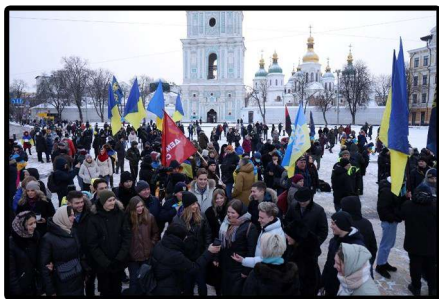

Success stories tend to focus on the achievements and evolution of the algorithms. Google's BERT transformer neural network is an example of a new type of algorithm that promises to revolutionize natural language processing.

Equally impressive -- and worthy of enterprise attention -- are the new tools being invented to automate machine learning pipelines and greatly accelerate the development process.

In addition, the field of AI is moving into various new domains such as conceptual design, smaller devices and multi-modal applications -- innovations that will expand AI's repertoire in many industries. It's also important for companies to keep an eye on the bleeding edge AI technologies that show tremendous promise and are now available for experimentation via the cloud -- quantum AI is an example. Two promising aspects of automated machine learning will be improved tools for labelling data and the automatic

2/Lt DGDAU Dambagolla

Russia has deep cultural, economic, and political bonds with Ukraine, and in many ways Ukraine is central to Russia's identity and vision for itself in the world. Following points describe the main points consider Russia's interests in Ukraine.

Family ties. Russia and Ukraine have strong familial bonds that go back centuries. Kyiv, Ukraine's capital, is sometimes referred to as "the mother of Russian cities," on par in terms of cultural influence with Moscow and St. Petersburg.

Russian diaspora. Among Russia's top concerns is the welfare of the approximately eight million ethnic Russians living in Ukraine, according to a 2001 census, mostly in the south and east. Moscow claimed a duty to protect these people as a pretext for its actions in Ukraine.

Superpower image. After the Soviet collapse, many Russian politicians viewed the divorce with Ukraine as a mistake of history and a threat to Russia's standing as a great power. Losing a permanent hold on Ukraine, and letting it fall into the Western orbit, was seen by many as a major blow to Russia's international prestige.
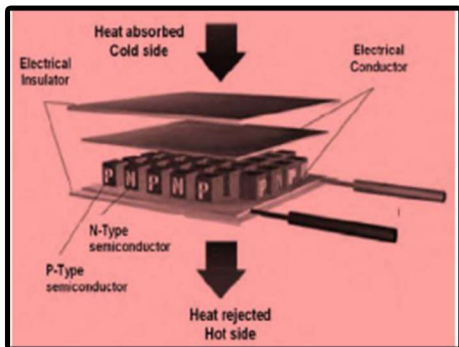
2/Lt DWGML Dissanayake

PELTIER MODULE

Power consumption is one of major struggling issue in world due to that semi conductors are the one of most suitable solution.Hence semiconductors should be place well manner way to get the effect. In here Peltier module is the best way to produced it, Peltier module is a develop system which produce he cooling effect without the use of mechanical devices and also refrigerant.

This Peltier effect works completely depends on point of contact & material which using. Three module of peltier module experimental temperature performance verify the 12 V,2A DC.This power supply should be continues without delay to get the peltier effect.

There are several advantages ,This thermos electric cooling system(peltier coolers) does not require any moving parts and fluidsto work.This system use in medical application, electronic applications, scientific equipments and etc. The speciality is it consist of refrigeration chamber, thermo electric modules, heat source and heat sink.

Not only that but also these are entirely solid state devices,reliable and quiet,no ozone depleting chloroflorocarbaone will give the environmental healthy

2/Lt RWMJIB Rathnamalala

FUTURISTIC TOP TECH GADGETS

Life in the future the high Technologies that will change the way we live. Over time since we invent more and more gadgets that make our life easier and more enjoyable every single day. In parallel with technology and brands have rolled out innovations both useful and way-out-there that you can own unique yourself. The tech trends in this year's product launches all over the globe can be categorized into two purposes: to improve your quality of life, or to boost up your ego (or both). For instance, some pricey electronics bring high-tech luxury to home décor or polish up your lifestyle to that of a millionaire.

But the more practical gadgets will improve health and wellness, or augment gaming experiences, for example, while still keeping things cool. Compiled a list of the most fantastic gadgets our grandchildren will likely be using in the future. And even if you'd never actually own one of these products, it's still nice to see where the industry is heading—sustainable and smart and wireless continue to be buzzwords—and what it's steering clear of. These listed top 6 Tech Gadgets Showcase the Best Technology of future trends and lifestyle.

Pen Printer

1. The Ambient umbrella- The umbrella that forecasts the weather

2. The Pen Printer

3. A hanger that dries and disinfects towels

4. A floating sofa

5. FoldiMate- A machine that folds your laundry

2/Lt RT Niroshan

Advantages and Disadvantages of Internet

Advantages

The Internet is the most popular and innovative creation within the world of technology is the Internet. The web is that the place where all types of data are present and even the communication process is feasible using the web. The planet has now become internet dependent due to its vast advantages. Here may be a checkout both its advantages and drawbacks.

The Cambridge Dictionary defines the web as an outsized system of connected computers around the world that permits people to share information and communicate with one another. The web is run and governed by various companies, businesses, governments, and academic institutions for his or her purpose. It carries a number of data about almost every subject and has very quickly become an important part of everyone's lives. Over 4.5 billion people everywhere on the planet are internet users currently.

Disadvantages

The internet is perhaps one of the best inventions thus far. As anyone can access the computer this made people by stripping away geographical barriers and sharing information instantaneously.

Communication Forum

The speed of communication becomes faster which is obtained through the web. Families and friends can confine touch easily. The platform for products like SKYPE allows for holding a video conference with anyone within the world who also has access.Anyone can find information on almost any imaginable subject. Plenty of resources are often found through the program in minutes.

2/Lt SHPP Thilakarathne

THE IMPORTANCE OF FANS FOR INDOOR AIR FILTRATION SYSTEMS

Concerns over air quality have been increasing, most recently due to the persistence of a global pandemic that began in 2019 as well as the occurrence of wildfires near major metropolitan areas around the world. While most people are cognizant of the dangers of air pollution, many may not realize that indoor air can be up to five times more contaminated than outdoor air.

This is not a trivial issue; poor air quality can have serious health repercussions including illness, allergies, respiratory issues, and skin irritations. Proper air movement and the use of air purification systems are critical for improving indoor air quality.

Contributing Factors to Indoor Air Quality

Proper ventilation, air purification systems, and even houseplants make positive contributions to Indoor Air Quality (IAQ). Pollutants and allergens (e.g., dust, pollen, pet dander, mold spores, etc.), on the other hand, have negative impacts. These contaminants can originate in a variety of ways, most significantly from the building itself, its occupants, and from outdoor air coming in.

Materials used in construction, furnishings, and even office equipment like printers and copiers emit VOCs (Volatile Organic Compounds), which are problematic gases that can be discharged from solids. Carbon monoxide and other products of combustion are introduced from common tasks like heating and cooking. People in a building can alter the levels of carbon dioxide and humidity while also posing a risk of spreading airborne pathogens. Outdoor air coming in through open windows and ventilation systems is affected by pollution natural disasters, ozone, pollen, and radon.

2/Lt NDS Viraj

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