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A QUARTERLY PUBLICATION OF CIVIL AVIATION AUTHORITY



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Regional Security

Experts On EDDs

Board inspects
Upcountry
Airfields

Experts discuss
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COVER PHOTO:

The CAA Managing Director, Dr. David Mpango Kakuba and other regional aviation experts in a group photo during the closing of a four-day Validation Workshop for creation of the East African Satellite Based Augmentation System at Sheraton Kampala Hotel.

Aviation Forum:

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Civil Aviation Authority Uganda

Editor: Vianney Mpungu Luggya, Manager Public Affairs

Secretary: Sylvia Kinimi

Assistant Editors: Jackie Kiyingi, Joan Kamwesigye, Shamilah Seyiga

Contributions can be sent to:

Aviation Forum, P.O. Box 5536

Kampala (U)

Tel: +256-414-321 437 Fax: +256-414-321 401 Email: aviation@caa.co.ug Website: www.caa.co.ug



LET'S USE SOCIAL MEDIA RESPONSIBLY

Social media is of late setting the agenda for news in the main stream media. Like a double edged sword, it has also been used to propagate good and bad causes for organisations in almost equal measure.

When there are positive developments, it presents one of the quickest avenues to send the word out to local and international audiences. The flip side of it is when a crisis manifests, it becomes a 'necessary evil' as it is also used by detractors to misinform and blow the disaster or crisis situation out of proportion.

Civil Aviation Authority (CAA) is no stranger to the ripple effect of social media rumours, a number of which spread like wildfire early this year before eventually being put down through the same medium. 2018 started with a number of avoidable crisis management situations that were created through irresponsible sharing of images of an incident involving cabin crew at Entebbe International Airport and a temporary situation at the landside following heavy rains, which was unfortunately exaggerated.

Social media users have also previously circulated videos of unfortunate events at other Aiports and attributed them to Entebbe. The climax was when a false and malicious claim that the CAA Board and Management had been sacked went viral.

While all the above were clarified and the rumours dispelled, the unnecessary stress and damage imposed on the organization and all parties involved is avoidable, if we all continued to work together to ensure that the few inevitable mishaps that happen are dealt with in-house.

There is no reason as to why exclusive images of what happens at the airside should be trending on facebook or twitter especially those taken from restricted areas that can only be accessed by staff of CAA or those of other agencies operating at the Airport. This is when we all need to exercise restraint and not be overcome by the frenzy to be the first to 'break news'. In any case there are no performance rewards for this despicable action.

The humble appeal to all is that we ought to use the advantage of numbers and act as social media influencers to responsibly use individual facebook/twitter accounts to like, positively comment, follow and retweet any CAA posts that may be proactively highlighting developments or clarifying issues.

United We Stand.



By Shamilah Seyiga

The European Civil Aviation Commission (ECAC) in conjunction with the African Civil Aviation Commission (AFCAC) convened a regional Civil Aviation Security (CASE) Workshop on Explosive Detection Dogs (EDDs) at Laico Lake Victoria Hotel from 5th to 6th June, 2018.

Speaking at the opening ceremony, the Director Safety, Security and Economic Regulation, Mr. Samuel Muneeza expressed delight at the opportunity for Uganda to host the event, which brought together security experts from the (AFCAC) partner States to deliberate on important national and international security matters.

He highly commended the ECAC and AFCAC for considering Uganda as worthy hosting partners, which he described as a "vote of confidence in Uganda's air transport system".

The director stated that aviation related terrorism cases across the globe called for extra vigilance at all levels as Aviation Security is "every body's responsibility" given the rising threat of terrorism to air transport across the globe. The importance of Explosive Detection Dogs (EDDs) cannot be over emphasized.

The training enabled the aviation security personnel to gain extensive knowledge in the use of Explosive Detention Dogs (EDD's), ECAC's work on EDD's, and to acquire lessons from sharing experiences in best practices.

"Explosive detection dogs have proved to be very reliable in efforts to curb crime as they compliment other explosive detection capabilities such as explosive particulate; and explosive vapor. Explosive detection dogs may also be used to detect explosives in the environment through: screening of cargo, mail and screening of hold baggage, as a complementary method to improve explosive detection," Mr. Muneeza said.

He pledged Uganda's continued cooperation with ECAC and AFCAC in relation to Aviation security.



Aviation security experts during a Civil Aviation Security Workshop on Explosive Detection Dogs (EDDs).

Uganda Excels in USAP Audit

Uganda excelled in the Universal Security Audit Programme Continuous Monitoring Approach (USAP - CMA) with a score of 81.8 %, well above the global average of 72%.

The audit, conducted by the International Civil Aviation Organization (ICAO), is mandatory to all Contracting States of the UN Agency that oversees the orderly development of the global aviation industry.

The programme was conducted from 12-20 June, 2017. It was a follow-up of an earlier audit conducted in January 2009. Uganda was the first country to volunteer to undergo such an audit when it signed a Memorandum of Understanding (MOU) with ICAO on 16th September 2002. At the time, the initiative was for establishment of compliance with the ICAO Chicago Convention of 1944 and Annex 17 on Aviation Security and the Aviation

Security Aspects of Annex 9 on Facilitation. Following the MOU, a trial audit was conducted between 26th November and 3rd December, 2002, as the first ever security audit among the 199 member-States of ICAO.

Following USAP 2009, Uganda filed a Corrective Action Plan (CAP) that formed the bulk of the audit issues in the 2017 audit. The areas included Aviation Security Legislation, Security Programmes and Regulations, Personnel Qualifications and Training. The others were Quality Control, Certification, Approval obligations and Resolution of Security concerns.

ICAO introduced USAP after the September 11th 2001 terror attack on aviation in the US. The programme seeks to ensure that States do not only have well written programmes and procedures that comply with ICAO requirements, but effectively and consistently implement them.

Aviation stakeholders sensitized in safety management systems workshop

A Safety Management Systems workshop for all aviation stake holders within the Entebbe flight information region was successfully held from 20th to 23rd February, 2018 at the Airport View Hotel in Entebbe.

Participants were reminded of individual safety accountabilities and responsibilities. The workshop was also aimed at sharing basic concepts and key elements of operational safety management, Mapping out areas, ways and avenues aimed at removing bottlenecks in the process of resolving safety concerns in the aviation industry.

Stakeholders raised a number of their issues and recommendations for Civil Aviation Authority to consider in order to enhance the aviation safety standards.









Jambo Jet, a low cost carrier, launched its services in Uganda with a maiden flight that landed at Entebbe International Airport on 15th February, 2018. The new entrant is scheduled to offer twice daily flights on the Entebbe – Nairobi route.

Speaking at the event, the Director Transport in the Ministry of Works and Transport, Mr. Benon Kajuna who represented the Minister of Works and Transport said growth of the air transport sector was important for the economy since it created opportunities for investment, capacity building, employment and creating linkages for better intra-regional trade.

"We need to build capacity to allow our local businesses to have greater access to foreign markets. Air transport supports exports and simultaneously increases competition and choice in the home market from foreign-based producers," he said.

The Civil Aviation Authority's Managing Director, Dr. David Mpango Kakuba congratulated the Management of Jambo Jet and applauded the airline for considering Entebbe International Airport as a worthy destination.

"In an effort to promote air transport development, Uganda embraced the Liberalization of air transport with in the region in line with the Yamoussoukro Decision (YD). This has included Multiple Designation; implying designating more than one airline on a route and removal of frequency and capacity limitations, which implies that the designated airlines can operate as many times as they wish," he said.

Jambo Jet is a beneficiary of the multiple designation policy as there are already three other Kenyan operators on the

route. Jambo Jet's introductory fare of Shs 400,000 for a one way ticket is currently the cheapest in the region. The airline's Chief Executive Officer, Mr. Willem Hondius said that Jambo Jet's entry into Uganda will make air travel more affordable to majority of people who travel for business or leisure in the region and beyond.

The airline was welcomed to Entebbe with the traditional water – gun salute amidst ululations from traditional dancers and other quests who graced the colourful occasion.



CAA Managing Director, Dr. David Kakuba (left with reflector) with Mr. Benon Kajuna who was representing the Minister of Works and Transport as Guest of honour at the official launch of JamboJet flights at Entebbe International Airport on Thursday15th February, 2018.

Vine Air launches Academy in Jinja



Vine Air launched charter and flight training operations at Jinja Airfield on Saturday 10th February, 2018.

The Minister of Works and Transport, Hon. Monica Azuba Ntege who presided over the launch as Guest of Honour on behalf of H.E President Yoweri K. Museveni pledged Government support through creating an enabling environment for business and putting in place the necessary infrastructure to support the operations.

"I am pleased to inform you that Government is reviving the national airline to undertake commercial aviation within the region and beyond. This will create opportunities for many of our young pilots and Engineers trained by this academy," the Minister stated.

She congratulated the management and staff of Vine Air and expressed delight that the school was fully owned and operated by Ugandans.

Speaking on behalf of the Civil Aviation Authority Managing Director, the then Director Airports and Aviation Security, Eng. John Kagoro applauded Vine Air for contributing towards the growth of Uganda's economy.

"CAA warmly welcomes investments in air transport of this nature and we pledge our commitment to continue supporting any such initiatives with technical guidance to ensure safe and secure operations in Uganda's airspace," Eng. Kagoro said.

He commended Vine Air for being patient and going through "the stringent processes required for certification as CAA continues to work with them to iron out any outstanding issues."

He added that the challenge with CAA approved organisations is the "obligatory requirement to comply with regulations and procedures established to administer them."

Vine Air's Head of Training, Capt. Dodd Katendeigwa thanked CAA for the support and cooperation extended to Vine Air. "As vine Air and Vine Air Flight Academy, we believe in making a difference and not just doing business. That is why we chose to establish a business that enhances one of Uganda's economic drivers; tourism, through provision of charter flights and training of world-class aviation professionals," he said



The Minister of Works and Transport, Hon. Monica Azuba Ntege (centre) flanked by CAA officials confers with the CEO of Vine Air, Capt. Dodd Katendeigwa (left) at the launch of the Vine Air Flight Training Academy at Jinja Airfield on 10th February, 2018.

ECAC Supports C-SAFIRE Training

By Michelle Natukunda



Uganda benefited from a three day Counter Surface-to-air Fire (C-SAFIRE) capacity building training conducted by the UK Department of Transportation in conjunction with the European Civil Aviation Commission (ECAC) at Imperial Golf View Hotel in Entebbe from 21st to 23rd February, 2018.

The training was aimed at equipping participants with better and more efficient ways of preparing for threats and how to respond to them

Speaking on behalf of the Managing Director of Civil Aviation Authority at the closing of the training, the Director Safety Security and Economic Regulation, Mr. Sam Muneeza hailed the UK government and ECAC for the support rendered to Uganda over the years.

"This is not the first time that the European Civil Aviation Commission (ECAC) is coming in to support Uganda in conjunction with the UK department of transportation as this is the second phase of a program that started way back in 2016. You may recall that ECAC supported the first phase of the Man Portable Defence Systems (MANPADS) training that was conducted in June 2016," he said.

The UK Government has also previously supported Uganda with a donation of two Explosive Trace Detection Systems, screening trays, counter terrorism training equipment and various other training programs.

"Needless to say, aviation remains a key target for MANPADS and other forms of terror attacks. The world witnessed this through recent spates of attacks at Istanbul Airport in Turkey on 28th June 2016, at Belgium Zaventen airport(suicide bombing on 22nd March, 2016, the attacks in France on 13th November, 2015 and the attempted attack on UK with Improvised Explosive Devices (IEDs) on 29th October 2010, among others", he said

Mr. Muneeza pledged Uganda's readiness to host the upcoming Civil Aviation Security (CASE) project regional workshop on Explosive Detection Dogs (EDDs) scheduled for 5th to 6th June, 2018 in conjunction with ECAC and the African Civil Aviation Commission.



The CAA Director Safety, Security and Economic Regulation, Mr. Sam Muneeza (centre) with a team of experts from the UK Government's Department for Transportation led by Mr. Mark Harrison at Imperial Golf View Hotel.

Works on modification of departure immigration counters, runway 12/30 commence

In a bid to further improve on services and facilities at Entebbe International Airport, Departure Immigration counters are being modified by China Nanjing International Limited to increase their number from six (6) to eleven (11).

One booth with four (4) counters has already been installed and all the re-modification works are expected to be completed by the end of July 2018. Earlier on in 2017, the same contractor modified Arrivals Immigration counters and their number was increased from 14 to 20. This has since enhanced efficiency in service provision.

As part of the upgrade and expansion of Entebbe International Airport, works for rehabilitation and strengthening of the old runway 12/30 commenced in May 2018 and are expected to be completed in November 2018. The works are undertaken by China Communication Construction Company (CCCC), which is also handling the on-going construction of a new 100,000 tonnes capacity Cargo Centre.

On- going works for the new Cargo Centre that is expected to handle 100,000 tonnes on completion

By the time of going to press, 78.6% of works for the new Cargo Centre's Aircraft Parking Apron were accomplished, 49% of works for the Cargo Terminal building were done, and 82% of works for the landside and Airside Access roads were also completed. Expansion works for Aircraft Parking Apron 1 were at 52% and extension works for Taxiway Alpha at 35% level of completion.

Meanwhile works for modification and expansion of the passenger terminal building are also on-going and are being undertaken by Seyani Brothers (U) Ltd.

Phase two of the expansion of the long term car parking was completed earlier on and it involved creation of additional capacity to park 140 cars to increase the total Long Term Car parking capacity from 260 to 410 cars. The work was undertaken by Energo Uganda Co. Ltd.

Also on-going is the improvement of air navigation services and automation of Entebbe International Airport by the Korea International Cooperation Agency (KOICA) as part of a USD 9.5 Million grant to Uganda from the Government of South Korea.

The Project involves:-

- Implementation of Air Traffic Services (ATS) Message Handling System
- A computerized Maintenance Management System (CMMS) and Airport Operational Database (AODB) system.
- Improvement of Flight Procedures efficiency through Air Traffic Management.

The three year project commenced in March 2016 and Uganda has on its part come up with counterpart funding of approximately USD 250,000 (per year) towards implementation of the project that is expected to be fully delivered by the end of 2018.

A new Terminal Operations Control Centre has already been put in place at Entebbe International Airport and a training facility fully equipped at the CAA Head Office.

The initiative will go a long way in improving safety, efficiency of airport systems and attainment of sustainability through strengthening of the human resource capacity in terms of training.





Board inspects Upcountry Airfields

As part of their oversight role, members of the Civil Aviation Authority Board of Directors inspected services and facilities at the various upcountry Airfields in the country.



Some of the airfields inspected include Mbarara, Kasese, Kisoro, Arua, Gulu, Pakuba and Soroti. At each of the stations, the Board held meetings with Management and staff manning the aerodromes, listened to the challenges experienced and provided guidance on areas for improvement. Timelines were also given for various actions that needed to be expeditiously implemented.

The inspection was led by the Board Chairman, Eng. Edward Mike Ndawula. The other Board Members were Dr. Asiimwe Rwekikiga, Mr. Enock Rukidi, Mrs. Olive Birungi Lumonya, Mr. James Kubeketerya and Eng. Mackenzie Ogweng. The accompanying Management team comprised of the Director Human Resource and Administration, Mr. Fred Bamwesigye, Director Airports and Aviation Security, Eng. John T. Kagoro, Manager Upcountry Airports, Mr. Sam Wonekha, Manager Legal Services, Mr. Joel Okwalinga, Manager Quality Assurance, Mr, Joseph Adrapi, Manager Public Affairs, Mr. Vianney Luggya, Chief Engineer Aerodrome Planning, Mr. Herbert Ngobi and Senior Civil Engineer, Mr. Fred Tuliraba.



The Board of Directors of CAA also visited Mbarara, Kisoro and Kasese Airfields during their routine inspection of upcountry aviation infrastructure.



Experts discuss Plans for EA Satellite-Based System

By Shamilah Seyiga

Civil Aviation Authority successfully hosted a validation workshop for the East African Satellite – Based Augmentation System in conjunction with the European Geostationary Navigation Overlay Service (EGNOS), the East African Community (EAC), the Common Market for the East African Community (COMESA) and the Inter – Governmental Authority on Development (IGAD) at Sheraton Kampala hotel from 17th to 20th April, 2018.

The regional aviation stakeholders brainstormed on the feasibility of establishing a Satellite Based Augmentation System (SBAS) module in East Africa, which is expected to increase runway capacity to handle more landings and departures, increase aerodrome accessibility and enhance safety through ensuring stabilized approach paths for flights, among others.

Speaking at the opening ceremony, the Minister of State for Transport, Hon. Aggrey Bagiire, commended EGNOS for considering Uganda as worthy hosts.

The Minister of State for Transport, Hon. Aggrey
Bagiire addressing guests during the opening
ceremony of the Validation Workshop for creation of
the E.African Satellite - Based Augmentation System
at Sheraton Kampala Hotel on 17th April, 2018

"Considering that the International Civil Aviation Organisation (ICAO)'s Global Air Navigation Plans require states to implement the optimization of flight approach procedures with vertical guidance, it is pertinent that a combination of application of basic Global Navigation Satellite System (GNSS), Barometric – Vertical Navigation Satellite – Based Augmentation System (SBAS) and Ground – Based Augmentation System is adopted," he said.

Speaking on behalf of the CAA Managing Director, the Director Air Navigation Services, Mr. Richard Ruhesi, said that as part of the Africa-EU long term strategic partnership to enhance safety in air transport, a project called Satellite navigation services for African Region (SAFIR) was started to build capacity in the region.

CAA Uganda was a pioneer in the formation of the Africa program and indeed participated in the initial trainings under SAFIR. Uganda has actively participated in most of the EGNOS activities in Kigali, Dar es Salaam, Nairobi and Dakar among others.

A number of former CAA technical staff including Ms. Agnes Kobusingye and Mr. Alex Wanda were integrated into the EGNOS Africa Program and are now working as CNS experts in Dakar.

In line with the global requirements in Aviation, CAA is progressively transitioning from conventional ground based navigation systems to satellite based navigation systems by embracing the next generation technologies. Uganda has so far successfully implemented GNSS procedures for Entebbe International Airport and there is optimism that the introduction of SBAS will go a long way in improving Air Navigation Services within the East African Region.

Hon. Bagiire assured participants of the Ugandan Government's support towards any initiatives aimed at embracing the use of technology to enhance service delivery.

"My Ministry will closely follow the technical deliberations that are going to take place over the next four days and we look forward to implementation of the positive resolutions as soon as possible," Hon. Bagiire said.

Satellite-based system procedures do not require any physical infrastructure at the airport served, but simply having satellite-based elements such as reference stations, master stations and geostationary satellites in place. It is therefore, anticipated that this will come with reduction in capital investments and recurrent expenditure for landing instruments.



opening of a four-day Validation Workshop for creation of the E.African Satellite Augmentation System at Sheraton Kampala Hotel

The implementation of Satellite-Based Augmentation Systems in East Africa is also expected to enhance the region's social and economic development through its benefits going beyond aviation, to impact agriculture, maritime, rail and road transport applications.

The four day meeting agreed on creation of a technical working group to develop the framework for creation of a regional module, which will take care of the roadmap for the development of the SBAS in Eastern Africa.

The meeting also agreed that JPO in collaboration with Regional Economic Corporations / States should expedite the implementation of GNSS monitoring and trial missions to assess the technical viability of the GNSS/SBAS systems. This is expected to support analysis of GNSS signal performance as part of the decision making tool for SBAS implementation.

Speaking at the closing ceremony, the CAA Managing Director, Dr. David Mpango Kakuba, emphasized the need to first engage stakeholders especially airlines who are the principal users of the airspace and for whom we are looking at enhancing efficiency in service provision through adoption of modern tried and tested technologies.

He added that CAA treasures the input of stakeholders and this is a vital component in implementation of any new project. "I have been reliably informed that the preliminary cost benefit analysis indicates that the benefits of implementing the Global Navigation Satellite Systems (GNSS) and satellite – Based Augmentation System (SBAS) exceed the initial investment costs in all considered systems. This is good news for the industry," he said.



Participants of the Validation Workshop for creation of the E.African Satellite - Based Augmentation System in a session at Sheraton Kampala Hotel on 17th April, 2018







IATA Day celebrations that were held in Kampala for the first time in history. Several panelists participated in an interactive panel discussion under the theme "The importance of aviation to Social- Economic Development of Uganda"



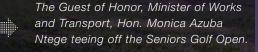
Members of Parliament on the Physical Infrastructure Committee at one of the several guided inspection/tour of up-country aerodrome facilities on 26th May, 2018.



The Director Safety, Security and Economic Regulation, Mr. Sam Muneeza (centre) in a group photo with aviation security experts during a Civil Aviation Security (CASE) Workshop on Explosive Detection Dogs (EDDs) at Laico Lake Victoria Hotel from 5th to 6th June, 2018.







CIVIL AVIATION AUTHORITY

Mr. Mark Ntege, Mr. Vianney Luggya, Mr. Jackson Karyarugokwe, and Mr. Patrick Billy, at a press conference at Uganda Golf Club. Civil Aviation Authority sponsored the Uganda Seniors Golf Open as part celebrations for the Aviation Week.





Civil Aviation Authority joined other agencies under the Ministry of Works and Transport to present to the media updates on the progress in implementation of Government Programmes at UNRA offices in Kyambogo. The CAA team exhibited a model of the ongoing works for upgrade and expansion of Entebbe International Airport.



The Deputy Managing Director of CAA, Mr. Fred Bamwesigye in a group photo with some of the Uganda Air Controllers' Association members during a Uganda Air Traffic Controllers' Association (UGATCA) workshop that took place at Central Inn on 3rd May, 2018



Guard against CYBER CRIME

By Andrew Mwesige & Isaac Kamugo

In April 2015, US cyber security expert, Chris Roberts claimed he had hacked a United airlines flight using the on-board entertainment system and managed to access the aircraft's Flight Management System to briefly control the aircraft. Roberts was held by the FBI and later banned from all United Airlines flights.

In December 2016, the UK Parliament was attacked by a threat that blocked the email service for some time. These, among others, are typical examples of the potential of cyber threats. Cyber-crime is an emerging threat and according to Forbes, the global cyber security market reached \$75 billion in 2015 and is expected to hit \$170 billion by 2020.



Cybersecurity is the body of technologies, processes and practices designed to protect networks, computers, programs and data from attack, damage or unauthorized access. In a computing context, security includes both cybersecurity and physical security.

Ensuring cybersecurity requires coordinated efforts

throughout an information management system. Elements of cybersecurity include:

- Application security
- Information security
- Network security
- Disaster recovery / business continuity planning
- Operational security
- End-user education

Aviation systems and cyber security

area of interest. The increasing need for data sharing in areas such as Surveillance and Aeronautical Information Management coupled with networked systems which may require remote access to maintain have presented vulnerabilities that can be exploited by cyber criminals.

The current trend in Air Navigation Services, both at the international level as well as within individual air navigation service providers (ANSPs), is toward increased sharing of information and creating a common situational awareness for a wide spectrum of aviation stakeholders. While this enhances the efficiency of operations and raises productivity, it also opens up the potential for cyber-attack. The vulnerabilities are only growing because current and next generation systems, like NextGen and Single European Sky ATM Research (SESAR), demand more information sharing through increased use of commercially available information technology, shared network and computing infrastructure, and network-centric architecture and operations.

Currently, CAA has two IP based networks comprising of the general Office network "Enterprise" and dedicated Aeronautical systems Network for Air Navigation systems. The former handles the CAA office network requirements such as mail, internet and the like, while the latter has the Air Navigation Services (ANS) core infrastructure.

A number of ANS systems are network supported including; the Monopulse Secondary Surveillance Radar (MSSR) Radar and Airspace Management System, the automated Aeronautical Information Management system, Automatic weather Observation System, Automated Terminal Information System and ATC voice and video recorder, among others. These systems present vulnerabilities which have to be secured against intrusion.





Cyber threats and attacks

yber criminals have evolved from hobby seekers motivated by notoriety into bona fide cybercriminals. These are often motivated by significant financial gain and sponsored by nation-states, criminal organizations, or radical political groups.

Cyber-attacks can be intentional or unintentional and targeted or non-targeted. Unintentional threats can be caused by inattentive or untrained employees, software upgrades, maintenance procedures and equipment failures that inadvertently disrupt computer systems or corrupt data. Intentional threats include both targeted and nontargeted attacks. A targeted attack is when a group or individual specifically attacks a critical infrastructure system.

A non-targeted attack occurs when the intended target of the attack is uncertain, such as when a virus, worm, or malware is released on the Internet with no specific target.

Repeatedly identified as the most worrisome threat is the "insider" – someone who has authorised and legitimate access to a system or network. Other factors may make use of insiders, such as organised crime or a terrorist group suborning a willing insider (a disgruntled employee, for example), or making use of an unwitting insider (by getting someone with authorised network access to insert a disk containing hidden code. However, insider threats can be guarded against and deterred by organisational policies,

logical authentication and physical (restricted proximity card access) or related controls.

Of paramount importance to cyber security in ATM, is data integrity and information assurance. Information assurance requirements are confidentiality, Integrity, Availability, authentication, authorisation, non-repudiation and traceability.

Today's attacker fits the following profile:

- has far more resources available to facilitate an attack
- has greater technical depth and focus
- is well funded
- o is better organized

Network Vulnerabilities

alware is Malicious softWare or code that typically damages or disables, takes control of, or steals information from a computer system. Malware broadly includes botnets, viruses, worms, Trojan horses, logic bombs, rootkits, boot kits, backdoors, spyware, and adware.

As an example, an attack often begins by simply luring an individual into clicking on an infected link. The resulting page remotely exploits the individual, gains root access on the user's computer, and downloads malware to the user's computer in the background. The malware then acts as a control point inside the network, allowing the attacker to further expand the attack by finding other assets in the internal network, escalating privileges on the infected machine, and/or creating unauthorized administrative accounts just to name a few tactics.

Denial of service attacks are mostly associated with Malware and prevent access to a particular service once the malware has taken control of the system.

Spear phishing is a targeted phishing campaign that appears more credible to its victims by gathering specific information about the target, and thus has a higher probability of success. A spear phishing e-mail may spoof an organization (such as a financial institution) or individual that the recipient actually knows and does business with, and may contain very specific information (such as the recipient's first name, rather than just an e-mail address).

Infection often has a social aspect, such as getting users to click on a bad link in a phishing e-mail, luring them to a social networking site, or sending them to a web page with an infected image, for example.

A root kit is malware that provides privileged (root-level) access to a computer. A boot kit is a kernel-mode variant of a rootkit, commonly used to attack computers that are protected by full-disk encryption.

Backdoors enable
an attacker to bypass
normal authentication
procedures to gain access
to a compromised system.
Backdoors are often installed
as failover in case other
malware is detected and
removed from the system.

Information technology users ought to guard against any of the above schemes.

The malware acts as a control point inside the network, allowing the attacker to further expand the attack by finding other assets in the internal network, escalating privileges on the infected machine, and/or creating unauthorized administrative accounts — just to name a few tactics.









Aviation Forum caught up with Dr. James Eyul, an Aviation Health Specialist and Director of Kazuri Medical Services based at Entebbe International Airport and below are excerpts of the interview.

Question: If I have my passport and a visa, why should you ask for medical documents at **Entebbe Airport?**

Answer: It's always prudent to find out information about the destination you are heading to. Countries have different health requirements for people entering their territories and many countries require authentic proof of vaccination against yellow fever. This is a requirement by World Health Organization (WHO) under the International Health Regulations (IHR 2005) Annex 6 & 7.

Uganda is near the Equator and therefore it is in the yellow fever belt alongside a few other countries like Brazil. Some countries like South Africa, Tanzania, Kenya, India, China and others wouldn't permit someone originating from Uganda without the yellow fever vaccination card. World Health Organisation updates these countries every year and a traveller can check for the information from the WHO website. In the past, many people were also known to have forged yellow fever vaccination cards for purposes of travel and some of these cards have been detected in foreign countries, which has tainted the image of Uganda and its medical practices. This is one of the reasons checks at departure for the authenticity of the yellow fever cards were instituted to reduce the vice. The Ministry of Health (MOH) vetted and signed a memorandum of understanding with 22 health facilities under its supervision to administer the yellow fever vaccine. This is in line with the Public Health Act.

Question: Are passengers arriving in Uganda also required to have yellow fever vaccination cards?

Answer: Passengers arriving in Uganda are also required to present authentic vaccination cards. Uganda is in the yellow fever belt and in the past few years there were some outbreaks that were well controlled by the Ministry of Health in conjunction with partners like WHO and CDC. Currently, arriving passengers without vaccination cards are vaccinated at their own cost (about USD 40) and issued the international vaccination card.

At the moment Uganda does not isolate vaccinated on arrival like some countries do, but advises them not to travel to areas with thick forests that harbour mosquitoes that spread the disease before the elapse of ten days during which the vaccine becomes protective against the disease.

Question: Which passengers are exempted from travelling with yellow fever vaccination cards?

Answer: Pregnant women, babies below one year and HIV/AIDS positive patients with a CD4 count below 200 are cleared by authorities to travel without yellow fever vaccination cards. Some people above the age of 60 years and others that are allergic to egg proteins have also been known to develop some minor skin rashes. Such people need to alert the health authorities and seek for an exemption letter to that effect.

Question: For how long does the yellow fever vaccine provide protection?

Answer: Recent studies by WHO have shown that the vaccine can protect someone for life. Uganda adopted this policy effective July 2016. However, one should show proof of vaccination whenever they are travelling to a territory that requires it, to avoid being vaccinated again. This does not cause any harm, but leads to unnecessary expenditure. Travellers are advised to handle their yellow fever vaccination cards the same way in which they handle their passports.

Question: What should I do if I am travelling to a country with a cholera outbreak?

Answer: You should get vaccinated against cholera. The World Health Organisation monitors all countries and issues alerts. It is important to read about a country you're travelling to. Cholera is transmitted by feaco-oral route, Good sanitation practices and eating hot food can prevent one from getting it.

Question: Are tuberculosis (TB) patients permitted to travel?

Answer: Pulmonary Tuberculosis (infecting the lungs) can easily be spread to other passengers in the aircraft. As the sick passenger with PTB coughs, neighbouring passengers can inhale the bacteria droplets and if their immune system is not strong enough they may develop the disease later on. The jet engine air circulation system does not filter the bacteria

and therefore re-injects it back into the cabin. Passengers at the active phase of PTB are not fit to travel for this reason. They are fit to travel after completing at least 4 weeks of an intensive phase of anti PTB treatment and the sputum test shows negative.

Question: Why would you stop pregnant women from travelling yet they are still strong and go about their work normally until the final week of pregnancy?



Answer: According to most airlines, pregnant women can travel by air up to a maximum of 30 weeks of their pregnancy. Some airlines may accept up to 33 weeks if travel time is short (like a one hour flight). At altitude there is reduced oxygen supply (up to 60% in pressurized aircraft), reduced humidity and reduced pressure. Studies have shown that a 26 weeks pregnant uterus, subjected to the conditions mentioned above, contracts. This literally means going into labour aboard an aircraft. The risk of contraction increases with the weeks of pregnancy, duration of flight, complications of pregnancy such as pre-eclampsia,

multiple pregnancy, previous

Caesarean delivery, and the like. A fit to fly check for pregnancy (and for other sickness) is done at the airport a few minutes before checking in/flying.

Question: My son is anaemic, is it ok to travel with him to London?

Answer: Depending on the level of anaemia, passengers with moderate to severe anaemia are not fit to fly. As you ascend to altitude, oxygen molecules become less. Oxygen gas has weight and as such gravity pulls them towards the earth surface compared to altitude. Modern air pressurized aircraft generate oxygen, which they have so far achieved equivalent of about 60% of oxygen on the ground. Normal humans adapt quickly to this and do not suffer any effect. However, an already anaemic passenger would suffer from lack of oxygen (hypoxia) and would go into coma unless diagnosed quickly and given supplemental oxygen.

Question: I am usually tense when I go on business trips and sometimes even my blood pressure shoots up. Is it advisable to travel when my pressure is high?

Answer: It is risky to travel when your blood pressure is very high. It's advisable to reschedule the flight and stabilize the blood pressure before you travel.

Question: There are many cases of patients referred for treatment abroad, how do you expect them to get to hospitals abroad if you discourage ill people from travelling by air?

Answer: Passengers for medical treatment must go through a mandatory 'Fit to Fly' check. It is usually conducted minutes before

boarding the aircraft because the condition of a patient sometimes changes. Fit to fly check assesses a passenger's prognosis at altitude.

Question: Many live with chronic illnesses that they may not disclose. How do you handle such cases?

Answer: While traveling, it is advisable to disclose to the check - in counter staff any illness that may affect your travel. This is for the individual's own safety because at altitude certain diseases are exacerbated and may turn out to be fatal.

Question: Are elderly people fit to fly?

Answer: Yes, as long as they do not have a medical condition that can be worsened by altitude and sitting for long.

Question: Why do Ugandans travel to Europe and America with their malaria drugs yet that's where, arguably, the best medicine is manufactured?



Answer: Make no mistake with that kind of assumption. It is advisable to travel to Europe or America with your anti-malaria drugs and painkillers. Most medical practitioners in those countries may understand malaria, but there may be no malaria medicine available in the pharmacy within a particular town. There's no malaria in Europe or America and their pharmacies do not stock malarial drugs.



What it takes to be an Effective **Contract Manager**

By Godfrey Lutimba Matovu, Manager Procurement

Contract management, which is sometimes referred to as contract administration, refers to the processes and procedures to manage the execution, or performance of a contract to ensure that the terms and conditions of the contract are delivered as agreed. Contract Managers are therefore key people in ensuring adherence to specifications, bills of quantities or terms of reference and delivering value for money or ensuring user satisfaction.

In Statutory Instrument Number 14 of the Public Procurement and Disposal of Public Assets (Contracts) Regulations 2014, regulation 53, spells out the responsibilities of the contract manager as follows:-

- a) Manage the obligations and duties of the procuring and disposing entity (CAA) specified in the contract;
- b) Make certain that the provider performs the contract in accordance with the terms and conditions specified in the contract.

During the staff meeting held on 14th June 2018, the Union Chief, Mr. Usher Were in his speech raised a complaint about the quality of food served to members of staff. He directed his complaint to Procurement to sort out the issue with the provider, Newrest. This was a perfect case of a contract management issue being misdirected to PDU rather than the responsible party, the Contract Manager.

For the record, PDU staff do not manager Contracts. All contracts are managed by duly appointed Contract Managers who have the powers and responsibility to ensure that the contract is performed in accordance with the terms and conditions. In the case of the poor food quality can best be addressed by, the contract managers in administration should take up that matter.

An effective Contract Manager should draw up a contract management plan (checklist) of the actions that he/she may refer to as time goes by; This plan will assist the managers to ensure that any deviations from the agreed terms are detected and corrected at an early stage and all contract obligations are complete before closing the contract.

It is recommended that Contract Managers consider each of the following steps for Effective Contract Management":

Make sure that you understand the terms and conditions of the contract and the proposed deliverables under the contract. Take time to give

- special consideration to the actual and potential impact of the contract to CAA, its employees and stakeholders.
- Identify the steps that need to be taken in order for the provider to comply with the requirements of any contract. For example, have a meeting with the provider and clearly spell out your expectations including dos and don'ts. Exhibit professionalism.
- Have a good understanding of the scope of the proposed contract and identify the related documents required to assist you manage the contract. It is advisable to get a copy of the provider's proposal, the bidding document that was used and documents on the PDU action file.



- If the contract is complex, it is advisable to prepare a time and responsibility schedule for review, discussion, and completion of all required items and activities. A Contract Manager could set up a team to assist them in management of the contract deliverables by identifying who does what and when. Never give the impression to the provider that they know more than you the Contract Manager.
- Always communicate your issues with the provider in writing to keep paper trail on file. Even when verbal communication has been used, follow it up with a written message. Contract Management has many legal implications and when your communication is in writing it mitigates a lot of issues.
- Ensure that agreed timelines are adhered to at all times and don't bend rules. In case of challenges, consult with stakeholders, but ensure delivery periods are respected.

Labour letter, interpol certificate key for travel to the middle east By Vianney M. Luggya

Of late many Ugandans have secured jobs abroad or are in the process of getting employment in other countries, but few are conversant with the procedures and requirements for going through Entebbe International Airport using an Employment visa.

This is meant to provide information that could be shared with friends and family on what one needs to know and do prior to embarking on a flight to their dream employment destination. After a series of harrowing reports of mistreatment of innocent Ugandan labourers in some countries, Government deemed it prudent to put in place control measures to ensure that Ugandans are guided through formal employment agencies or go through a stringent, but necessary clearance process that ensures their safety and that of their employers.

To this end, work/employment visas are looked at in two categories; one for employment secured through an employment company and the other for employment abroad secured privately by an individual migrant worker.

Once an individual gets employment in any of the Middle East countries such as Saudi Arabia, Iraq, Kuwait, Jordan, Qatar, Bahrain, Afghanistan and United Arab Emirates or Somalia, they need to apply to the Ministry of Gender, Labour and Social Development (MGLSD) for a clearance letter. This requirement does not apply to employment in other countries.

The application must be accompanied with a valid Certificate of Good Conduct from INTERPOL Uganda, formal employment letter, valid Visa and consent letter(s) from guardians/parents or a spouse. In addition, the applicant is required to fill in an External Employment Form 4, which is presented to the MGLSD alongside the other documents indicated above.

These important documents including the Ministry Clearance and Interpol Certificate are cross checked for authenticity by an official from the MGLSD at the External Employment Help Desk located on Departures just the security screening machine. Ugandans going for employment to the above mentioned countries and handled by certified labour agencies go through the same process.

Verification of the labour clearance letter and Interpol Certificate is the responsibility of the officials manning the External Employment Help Desk who then give a green light the Immigration.

The regulations in place were necessitated by the need to safeguard Ugandans following social media outcries of torture and mistreatment while on duty in some countries and subsequent failure to track the culprits. The system in place now ensures that there is an accountability data bank of the whereabouts of Ugandans with appropriate information about their employers. It also ensures that the country exports labourers with a clean record that projects a good national image.

CAA has unfortunately received disturbing complaints from passengers who have had an unpleasant experience arising out of a few unscrupulous officials who have taken advantage of the regulations or the lack of information to ask for facilitation in exchange of favours.

Action has been taken including withdrawal of passes from staff of different agencies who have been found culpable of involving themselves in extorting money from passengers. In addition, there are new regular announcements at the Airport cautioning passengers not to be compelled or lured into paying money to anyone in exchange for favors. These and other measures are aimed at ensuring a better passenger experience.

What it takes to be an Effective Contract Manager

- 7. In case of any required changes to contract terms and conditions such as price, specifications, TORs or deliverables. Pleases follow the laid down procedures in the contract and other procedures like informing PDU, Contracts Committee, and the Accounting Officer.
- Process provider's payments on time and always attach relevant documentation to avoid unnecessary delays.
 Enclose a copy of relevant contract pages, performance or advance payment guarantees, tax invoices and your recommendation. This helps in expediting all internal approvals.
- 9. Once the closing out of the contract is nearing, ensure you have all the risk management documentation such as warranty documents, defects liability documents, insurance and retention clauses to ensure that in case of any faults or defects, they can be quickly rectified. Have a close out meeting with all stakeholders to ensure

- that their concerns are taken care of before the provider leaves the site.
- 10. Prepare a contract performance report at the end. Issue a certificate of completion with recommendations for continuous performance of the project like milestones for maintenance or reviews. In case it's a long term contract under frame work arrangement, include provision for regular reviews to ensure the contract is performing to the expectation of the stakeholders.

The above tips will enable all Contract Managers to perform their responsibilities and ensure value for money. They will also enable them to comply with the requirements of the law and be able to respond easily to any queries both (internal and external).

NOTE: For more information on contract management, please refer to PPDA Act & Regulations.



Mr. Fred K. Bamwesigye was appointed Deputy Managing on 1st May, 2018. Prior to his appointment, he served as the Director Human Resource and Administration from 2009.

Before that he worked for 11 years at the National Environment Management Authority (NEMA) in various leadership capacities as Human Resource and Administration Manager. He also had a stint at the National Water and Sewerage Corporation (NWSC) as Human Resource/Legal Manager.

Mr. Bamwesigye has a wealth of experience from different sectors having also previously worked with the Foods and Beverages and Makerere University.

He has also held several other positions of responsibility as:-

- · Member of the Governing Council of the Federation of Uganda Employers
- Founder Member of the Board of Directors of the African Association of Training Organisations (AATO) based in Addis Ababa
- Member of the Technical Committee of Finance and Administration Civil Aviation Safety & Security Oversight Agency (CASSOA)
- Member of the Human Resources working Group of the Civil Air Navigation Services Organisation (CANSO)
- Has participated extensively in the committees of labour standards of the International Labour Organisation (ILO)

He holds a Master of Human Resources Management from The Hague and Manchester, a Bachelor of Laws from Makerere University (MUK), a Diploma in Legal Practice from the Law Development Centre (LDC).



Mr. Hannington Kacooni Banyendera was elevated to the post of Director Finance with effect from 14th May, 2018.

He holds a Master of Business
Administration from Makerere
University, a Bachelor of Commerce
degree from Makerere University, a
Post Graduate Diploma in Taxation
& Revenue and as several other
professional qualifications in the
Accountancy field.

He has been working with Civil Aviation Authority since, 2009 as Manager Strategic Planning.

Mr. Banyendera who has also previously worked with served other organizations including Uganda Revenue Authority

has a wealth of knowledge, skills and experience in the Auditing and Accountancy profession.



Mr. Samuel Wonekha commenced his duties as General Manager – Regional Airports on 1st May, 2018.

Prior to his appointment, he was the Manager Up Country Airports and was providing leadership to 13 regional and domestic airports. He rose through the ranks having joined CAAU's Directorate of Airports and Aviation Security as a Senior Administrative Assistant in 1995.

He holds a Master of Public Administration and Management degree from Makerere University, a post graduate diploma in Human Resource Management from Uganda Management Institute and a Bachelor of Arts in Social Sciences majoring in Public Administration from Makerere University. He also has an IATA Diploma in Airports Strategic Management.

He recently completed a Global Airports Council International (ACI) – International Civil Aviation Organisation (ICAO) Airport Management Professional Accreditation Programme (AMPAP) earning him an International Airport Professional (IAP) title.



Mr. Bashir Kalenge commenced his duties as Principal Administration & Estates Officer on 1st June 2018.

Mr. Kalenge holds a Master of Laws Degree in International Business law, Bachelor of Laws Degree, Diploma in Legal Practice and other professional qualifications in the field of Law and Management.

He previously worked in different capacities with Nkumba University, Kampala International University, Kalenge Ssemambo and Company Advocates, and State House.

Appointments



Mr. Nsimbe Amin was elevated to the post of Manager Internal Audit and Risk Management with effect from 4th September, 2017.

He holds a Master of Science in Accounting and Finance from Makerere University, a Bachelor of Commerce (Accounting) from Makerere University, is a Fellow of the Association of Chartered Certified Accountants (ACCA), is a Certified Information Systems Auditor, a Certified Forensic Investigation Professional, and holds several other professional qualifications in the field of Audit and Risk Management.

Mr. Nsimbe has been working with Civil Aviation Authority since 7th October, 1999 and has risen through the ranks having held several positions prior to his appointment as a Manager



Mr. Barungi Emmanuel assumed office as Aviation Security Manager in 2017.

He holds a Master of Science Degree in Security Sector Management (MSc/SSM) from Cranfield University - UK, Master of Arts in International Relations and Diplomatic Studies (MA/IRDS) and Bachelor of Education from Makerere University. He also has several other professional qualifications in the field of security.

He previously worked as Director National Security Council (NSC) and Joint Intelligence Committee (JIC) Affairs, Internal Security Organization. He also worked as Director of Security and Strategic Studies, Deputy Director ISO, Regional Internal Security Officer (RISO) and Chief Liaison Officer Airports charged with coordinating the joint intelligence activities at Entebbe International Airport.



Ms. Marion Tibenderana was elevated to the post of Manager Aeronautical Information

Management/MET Liaison with effect from 10th August, 2017.

Ms. Tibenderana holds a Master of Science degree in Data Communication and Software Engineering and a Bachelor of Science Degree in Physics and Mathematics both from Makerere University. She also has a Mastery of Management Diploma in Management and Leadership from Cambridge International College, UK.

She has been working with Civil Aviation Authority since 2002 and has held several positions until her appointment as a Manager.

She has a wealth of knowledge, skills and experience in Aeronautical Information Management.



Mrs. Molly Nyemera Besigye commenced her duties as Manager Management Accounting in August, 2017.

She is a member of the Association of Chartered Certified Accountants (ACCA) and holds a Master of Business Administration (MBA) from Maastricht School of Management/ESAMI, a Bachelor of Business Administration from Nkumba University, a Uganda Diploma in Business Studies from Caltec Academy, and several other professional qualifications in the field of Finance and Accounting. She has been working with Civil Aviation Authority since 1992 in different capacities.



Ms. Nakimu Jane was appointed Manager Aviation Security, Facilitation Policy and Regulation with effect from 1st December, 2017.

Ms. Nakimu holds various professional qualifications in the field of security. She has been working with Civil Aviation Authority since 1993 and has held several responsibilities until her appointment as a Manager. She is an accredited/certified International Civil Aviation Organisation (ICAO) Aviation Security Instructor and a certified ICAO & Concordia University AVSEC Professional Manager (ICAO/PM)



Ms. Irene Atto Lawoko was elevated to the post of Manager Air Navigation Services & Aerodrome Standards with effect from 1st December, 2017

She holds a Master of Business Administration from Uganda Martyrs University, a Bachelor of Statistics from Makerere University and several other professional qualifications in the field of Air Navigation Services. She has a wealth of experience having worked with different Directorates in Civil Aviation Authority since 1993.



TOGETHER FOREVER: Mr & Mrs Ssimbwa Adam said their vows at All Saints Cathedral, Nakasero. They later hosted their guests at Nican Resort, Seguku.

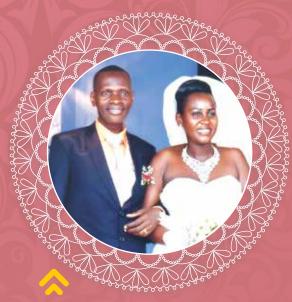


SPECIAL DAY: Mr & Mrs Kasozi Andrew were joined in Holy Matrimony at St. Peters Catholic Church, Nsambya. Their guests were hosted to a sumptuous reception at Kampala Serena Hotel.





ENDLESS LOVE: Mr & Mrs Mworozi Dickson were wed at Uganda Martyrs Church, Mbarara. Their guests were hosted at Kyaruhanga Ibanda Municipality.



I DO: Mr & Mrs Langa Silver tied the knot at Life Church, Namasuba. They later hosted guests at Westfield Gardens, Bwebajja.

LIFE INVESTMENT: Andrew D. Kasozi, Khalid Omar and Muzamil A. Siiku attained Post Graduate Diplomas in Human Resource Management from Uganda Management Institute on Friday 27th April, 2018.





The CAA Manager Public Affairs, Vianney M. Luggya being interviewed by an NBS TV reporter after the game between CAA and NBS TV.

CAA hits Corporate League Summit

The Civil Aviation Authority sports team has hit the summit of the Corporate League following an energetic display in the games played against DFCU Bank, Uganda Revenue Authority, Pride Micro Finance, Letshego, CIPLA Quality Chemicals and Electoral Commission in the June, 2018 corporate league outing.

CAA registered splendid performances including a 1-0 win against DFCU Bank, 2-0 victories over Pride Micro Finance and Electoral Commission, the Managers triumphed 2-1 against their Letshego counterparts. There were also two hard fought 1-all draws against Uganda Revenue Authority and CIPLA Quality Chemicals.

The corporate league outings take place every last Sunday of the month at different locations around Kampala. CAA presented teams participating in Football, Swimming, Netball, Athletics and Wood ball, among others.

The corporate team with the most points at the end of the year is declared the winner. Trophies are awarded to the different category winners during the corporate league dinner at the end of the year.

Meanwhile the CAA football team played a friendly game against NBS TV and won the game played in March 2018.





Civil Aviation Authority

Entebbe International Airport P.O. Box 5536 Kampala Uganda Head Office Tel: +256 0312 352000 Airport Tel: +256 0312 352000 Email: aviation@caa.co.ug Website: www.caa.co.ug



