

2018 CAP Implementation Workshop Speakers

(Updated as of 23 October 2018)

For details about the venue and logistics, see [Information Note](#)

For the provisional Programme, see [Programme](#)

For the provisional list of participants, see [Participants](#)

1.1 Welcome from Hong Kong Observatory (HKO)



Chi-ming Shun joined the Hong Kong Observatory in 1986 after graduating from the University of Hong Kong as Bachelor of Science. After joining the Observatory, he received professional training in weather forecasting and nuclear radiation in the United Kingdom. Mr Shun specialized in aeronautical meteorology since the 1990s and led a team of researchers to develop the world-first and award-winning Light Detection And Ranging (LIDAR) Windshear Alerting System for the Hong Kong International Airport. Mr Shun was appointed as Director of the Hong Kong Observatory in April 2011. In the international arena, Mr Shun was President of the Commission for Aeronautical Meteorology (CAeM) of the UN World Meteorological Organization (WMO) from 2010 to 2018 – the first Chinese, and also the first Asian, taking up this position in the WMO. Mr Shun is also Permanent Representative of Hong Kong, China with WMO, Chair of the Hong Kong Meteorological Society, Fellow of the Royal Meteorological Society (FRMetS) and Member of the Chinese Meteorological Society Executive Committee.

1.2 Welcome from the International Association of Emergency Managers (IAEM)



Bruce Wong is a Country Representative (Hong Kong) of IAEM, a non-profit educational organization dedicated to promoting the goals of saving lives and protecting property during emergencies and disasters. To achieve the organizational goal, he actively participates in international humanitarian assistance exercises and meetings representing the IAEM, and shares the latest development and common practice about urban disaster response and business continuity to the public and private sectors in Hong Kong, Taiwan and mainland China. Bruce has a Bachelor of Science with Honours in Occupational Safety, Health and Environment from Middlesex University, London.

1.3 Welcome from the International Federation of Red Cross and Red Crescent Societies (IFRC)



Jessica Ports Robbins is the Technical Advisor, Preparedness ICTs for the Global Disaster Preparedness Center (GDPC). She has worked with the American Red Cross since 2001, and in her role with GDPC she manages the Center's digital tools, including the Universal App Program, the WhatNow Portal, and Atlas business preparedness app, and she provides technical guidance to partner Red Cross and Red Crescent National Societies. Her education includes a BA in History from Elon College, an MS in History & Sociology of Technology & Science from Georgia Institute of Technology, a certificate in Disaster Resilience Leadership Sciences from Tulane University, and a pending Ph.D. in international development, also from Tulane. Areas of expertise include information and communication technology for development (ICT4D), mobiles for development (M4D), disaster risk reduction, shelter operations, pet evacuation and sheltering, volunteer management, international humanitarian law, and community disaster preparedness.

1.4 Welcome from the International Telecommunication Union (ITU)

3.17 ITU and Emergency Telecommunications



Vanessa Gray heads the ITU Development Sector (ITU-D) Division for Least Developed Countries, Small Island Developing States, and Emergency Telecommunications. In this role, she is responsible for studying needs, developing specific programs of assistance, and identifying ICT for Development opportunities. She also coordinates emergency telecommunications, developing ICT projects that provide assistance for disaster prevention, preparedness, mitigation, response, and recovery. Her Division is responsible as well for ITU-D programs on e-waste and climate change adaptation. Prior to this position, Vanessa was in the ITU ICT Data and Statistics Division where she contributed to analytical publications, organized ICT-related meetings, and delivered national and regional training on ICT statistics. Vanessa holds a Master's degree in Political Science and Economics from the Graduate Institute of International and Development Studies in Geneva, Switzerland.

1.5 Welcome from OASIS (standards organization)

3.21 Update on OASIS Emergency Management Technical Committee Work



Elysa Jones is an internationally recognized expert in Emergency Interoperability Communications via Data Messaging. Elysa is Chair of the OASIS Emergency Management Technical Committee since 2004. Her Committee developed and maintains the Common Alerting Protocol (CAP) Standard, which is also ITU recommendation X.1303. Additional standards for message distribution, resource messaging, hospital availability and tracking of emergency patients are products of her Committee.

1.6 Welcome from the World Meteorological Organization (WMO)

3.20 WMO Perspectives on CAP Implementation Worldwide



Samuel Muchemi has been, since 2006, the Scientific Officer, Service Delivery Division in the Weather and Disaster Risk Reduction Services Department of the World Meteorological Organisation. He joined the Kenya Meteorological Department (KMD) in 1980 as a weather forecaster and later as a weather presenter on television for the Kenya Broadcasting Corporation (KBC). He was also in charge of the Public Weather Services Division of KMD.

2 Organization of the Workshop

4.2 [Overview of the Filtered Alert Hub](#)

4.7 [Alert Hub Policy-level Lessons Learned and Operational Considerations](#)

4.9 [Making a Clickable Map Display of CAP Alerts](#)



Eliot Christian is a *pro bono* consultant to various organizations. He leads the Filtered Alert Hub initiative, part of the U.S. NOAA Big Data Project, and he conducts CAP training for the USAID/Office of Foreign Disaster Assistance. He is also a *pro bono* consultant to, and retired from, WMO. He was a chief architect of the WMO Information System and the Global Earth Observations System of Systems. Eliot is also retired from, but remains a volunteer to, the United States Geological Survey (USGS) where for many years he helped lead broad programs for environmental data sharing. Since 2001, he has been active in developing and promoting CAP, especially internationally.

3.1 AccuWeather and CAP

4.8 AccuWeather and the Filtered Alert Hub



Dan DePodwin is Director of Core Weather Content at AccuWeather, Inc. In this role, Dan leverages his meteorological knowledge and leadership skills to manage a diverse team responsible for enhancing AccuWeather's environmental data and forecast systems that provide detailed, accurate forecasts globally. One of the Core Weather Content team's key functions is collaboration with leading National Meteorological and Hydrological Services (NMHS). AccuWeather actively partners with NMHS to amplify the distribution of early weather warnings and other foundational weather insights both within the borders of each country and around the world through AccuWeather's large and well-established user base. AccuWeather has extensive experience working with CAP and developing unique ways to quickly communicate weather warnings users. The largest and fastest-growing weather company and leader in digital media and weather-related bid data, AccuWeather reaches over 1.5 billion people worldwide, helping to plan their lives, protect their assets, and plan their day.

3.2 Architecture of a Global-scale Alert Hub

4.3 Rabbit Message Queue for Near-Real-Time Processing of CAP Alerts

4.11 Future Enhancements to the Filtered Alert Hub



Ian Ibbotson is owner and Director of Knowledge Integration Limited, a company in Sheffield, United Kingdom, primarily specializing in distributed information indexing and retrieval architectures. Ian also volunteers as principal designer and developer on the Filtered Alert Hub initiative, part of the NOAA Big Data Project. This cloud-based, free resource is a global-scale aggregator of Internet news feeds that link to emergency alerts in the CAP standard format. This Alert Hub aggregates about 80 national-scale CAP news feeds from 66 countries and it is growing steadily. Ian recently migrated the Alert Hub base technology to his new design based on Rabbit Message Queue.

3.3 CAP and Mobile Multimedia Alerting

Menno Bot is Solution Architect at one2many BV in The Netherlands. One2many provides Cell Broadcast and LTE Broadcast solutions for Telecom operators as well as Public Warning Portal to Governments. Menno is responsible for the architecture of one2many products and also participates in various internal and external research projects, several involving CAP. Menno has a Bachelor degree in computer science from the Amsterdam University of Applied Sciences and over 20 years of experience in Telecommunications in various countries, working previously with Comptel, Nokia and Group 2000.



3.4 CAP and Natural Disasters

Efraim Petel contributed to the effective USA Integrated Public Alert and Warning System (IPAWS) starting in 2003, joining a panel of experts whose mandate was to write a National Policy for Warning. This policy was crafted for country leaders in their quest for a good warning system for the nation. In addition, he took a part in the development of the international Common Alerting Protocol (CAP) and developed warning systems based on this protocol, including IPAWS. The systems developed and installed under his supervision are "system of systems" with plug-and-play capability. Between 1999 and 2012 Efraim led Alerting Solutions, Inc. in California, a company that developed, installed and maintained many warning systems all over the world. From 2012 to 2018 Efraim served in AtHoc (Blackberry) as a Senior Director for Strategic Initiatives and as a Vice President for Global Public Safety. Now Efraim is a consultant and provider with AlertNetUSA.





3.5 CAP Implementation in India

Saurabh Basu is a Senior Research Engineer at India's Centre for Development of Telematics (C-DOT) in New Delhi. His primary expertise is end-to-end development of telecom products. His responsibilities include brainstorming with stakeholders to frame and prioritise requirements for products, and the design and implementation of telecom solutions. Saurabh was the solution architect for various Geo-Intelligence projects of C-DOT, such as the Optical Network planning for NOFN, Fiber Fault Localization System, and more recently the geo-spatial service for a critical project with extreme national importance: Centralised Monitoring System. He actively participates in and contributes to OneM2M, the international standardisation body on M2M (machine-to-machine communications). In 2016 his C--DOT Team received the Aegis Graham Bell award for "Innovative Managed Services".



3.6 CAP Implementation in Italy 2018

Marcello Marzoli, Fire Captain, degree in Aerospace Engineering, since 1990 he has been working for the Italian Ministry of Interior, Department of Fire Corps, Civil Defence and Public Rescue at the Rome HQ, the National Control Centre, the Air Service and for the National IT Services. Since 2001 he has been working on European Space Agency projects ITALSCAR (2001) and TALED (2017) and the EU R&D projects LOCCATEC (2000), INSTANT (2001), LIAISON (2003), PETRA-NET (2005), REACT (2005), SAVE-ME (2008), IDIRA (2010), REFIRE (2010), HELI4Rescue (2011), AF3 (2014), STORM (2016), FIRE-IN (2017) and IN-PREP (2017). Since 2002 he has been appointed as expert evaluator and monitor by the EC for Space, IST, NMP and Security R&D activities. He is inventor and assignee of a couple of Italian Patents in the medical apparatus domain. He has published several papers.



3.7 CAP Implementation in Mexico 2018

Mario Alvaro Ruiz Velazquez is an advisor to the Centro de Instrumentación y Registro Sísmico and a specialist in Emergency Alert Systems. He holds a Master's Degree in Computing Systems and his Ph.D. studies focus on Emergency Alert Systems and Crises Leadership. An information technology advisor in Safety and Warning Systems to various levels of government in Mexico, he participates in design, development and installation of the Mexican Earthquake Alert System (SASMEX) using EAS-SAME and CAP. He also works with academic, specialist and civil protection authorities in developing the Earthquake Warning System in California, USA.



3.8 CAP Implementation in the Comoros Islands

Fouad Issoufa Ali is the head of environment, climatology and risk reduction and disaster at the Comoros National Meteorology Directorate (DNM). DNM is an organization dedicated to the promotion of the objectives of informing the population about the climate, inundation, risks and disaster and of also alert in case of tsunamis. Fouad is a leader recognized in the Comoros by his courage to save, to alert, to inform the population in case of a climatic threat. He is implementing CAP in the Comoros. His education includes a bachelor's degree in science, a degree in biology, and a master's degree in environment supported at the University of Yaoundé1 in Cameroon. Fouad is the focal point in the Comoros for the Global Framework for Climatological Services.



3.9 CAP in Deutscher Wetterdienst

Martin Klink is Software Architect at the German Meteorological Service (DWD) and responsible for the development of the automatic warning production system. He has a B.Sc. In Software System Engineering and a Diploma in Computer Science. He started his work for DWD in 2008 as Software Engineer in the project AutoWARN and took the role of technical lead in the project PVW (Production and Dissemination of Warnings). He is responsible for introducing CAP as de facto standard for exchanging warning data in DWD.

3.10 CAP in the Philippines



Arnel Manoos is a Weather Facilities Specialist in the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA), where he is in charge of the Meteorological Equipment & Telecommunication Technical Services Section. He supervises maintenance of Automatic Weather Stations and other surface-based observing facilities and he handles matters pertaining to the upgrading, maintenance and development of the agency's ICT resources. Arnel has a Bachelor of Science degree in Electrical Engineering from the Lyceum of the Philippines and 30 years of service in PAGASA. He was the lead focal person for the PAGASA-Google Public Alerts initiative under the Google Crisis Response Program. He was also the lead for the SAMBRO CAP-enabled Multi Hazard Situational Awareness Project in PAGASA. Arnel was a Technical Working Group member for the establishment of the National Meteorological-Hydrological Telecommunication System under the national modernization program of PAGASA.

3.11 CAP in the Regional Integrated Multi-Hazard Early Warning System (RIMES)



Jeianne Ermac is Systems Administrator for RIMES and in that role she supports RIMES computing systems and contributes to decision-support system development. Prior to joining RIMES, Jeianne worked in the public and private sectors in the Philippines as a software engineer, data processor, and programmer. Jeianne has a Bachelor of Science degree in Computer Science from the Visayas State University, Leyte, Philippines.

3.12 China's National Early Warning Release System



Jinjun Pan is now serving as the deputy director of Public Meteorological Service Center (Nation Early Warning Center) of China Meteorological Administration (CMA). Previously, he worked in Inner Mongolia and in Beijing Meteorological Bureau. His rich experience in meteorological disaster prevention and reduction included participation in the 2008 Beijing Olympics meteorological service, and in planning and designing a nation-wide meteorological service. Jinjun is also director of the Public Meteorological Service Committee of China Meteorological Society, and director of the Wind Energy Resource Monitoring Evaluation and Forecasting Subcommittee of the National Energy Industry Wind and Electricity Standardization Technical Committee. He currently leads CMA participation in and promotion of the Asia Regional Early Warning System within the WMO Global Multi-hazard Alert System (GMAS).

3.13 IFRC Perspective on CAP Alert Hubs



Omar Abou-Samra is Director of the IFRC Global Disaster Preparedness Center (GDPC), hosted by the American Red Cross in Washington, DC. Prior to this, he focused on grants from and partnerships with government, private and non-profit organizations; and innovative programs at a global scale to promote disaster preparedness. Omar has over fifteen years of experience working in non-profit, disaster and technical fields, with specialization in mass care including emergency feeding, relief distribution and shelter. He is also an experienced responder to complex emergencies, within the U.S. and internationally.

3.14 Indigenous Language Alerts with CAP



Rob Hopkins comes from a pioneering family of Canadian inventors. He started in the arctic communications industry in 1992 by building a private mountain top wireless link connecting Tagish and Whitehorse (120kms away) to communicate purchase order faxes with East Asia. This was followed by an "under regulated" broadcast radio station in 1997 from his home in Tagish. While struggling to make his station accessible to the local populace while providing community access programming and public alerting, he began to envision a web based "radio station in a box" prototype with unattended CAP Emergency Broadcasting at its core. His group has since released an open source Media Asset Management (MAM) system supporting CAP images with video and audio messaging. This is being used throughout all broadcast sectors in Canada, including commercial, community, campus, indigenous, development, and tourist information for radio, along with TV, scrolling LED, and digital signage systems.



3.15 IPAWS (Integrated Public Alert and Warning System)

4.6 Migrating U.S. IPAWS to the Cloud

May Wu is a Systems Engineer in the United States Federal Emergency Management Agency's (FEMA) National Continuity Programs, Integrated Public Alert and Warning System (IPAWS) Division. The IPAWS Program is responsible for providing an effective, reliable, integrated, flexible, and comprehensive system to alert and warn the American people in situations of war, terrorist attack, natural disaster, or other hazards to public safety and well-being. The focus of Ms. Wu's work is modernizing the IPAWS-OPEN system and migrating the system into the cloud environment. Ms. Wu has a Master of Engineering degree from University of Maryland College Park.



3.16 Topic tbd (Canada)

Norm Paulsen is a senior meteorologist with Environment Canada and one of the principle architects of the CAP Canadian Profile. He has expertise in alerting systems design, and has been thoroughly involved in warning message production since 1991. Norm has contributed to CAP in both Canada and the WMO; is an active participant in the OASIS technical and sub-committee groups working on the next CAP versions; and is currently the chair of the CAP Canadian Profile Standards Working Group. His current position involves analysis and strategic planning for alerting programs of Environment Canada as well as being a consultant to many Federal Government departments engaged in Public Alerting with CAP.



3.18 The New Severe Weather Information Center Website

4.1 Welcome from Host HKO

Armstrong Cheng is the senior scientific officer of the Service Delivery Division in HKO, responsible for weather information dissemination systems, weather information services development, weather observation and reporting, as well as automation of operations in the HKO forecasting office. Mr Cheng led his team to develop a fully automatic dissemination system for HKO, allowing weather warnings and information to deliver instantly from forecasters directly to end users through various channels including mobile apps and social media. The highly popular weather app, MyObservatory, also ranked in the top five in the Hong Kong App Stores in 2017. He has been coordinator of two WMO projects: Severe Weather Information Centre (SWIC), and World Weather Information Service (WWIS), since 2012. Recently, he joined the Expert Group on the WMO Global Multi-hazard Alert System (GMAS), and he successfully launched the beta website of SWIC 2.0, displaying CAP warnings of over sixty WMO members.

3.19 Overview of Meteoalarm and CAP Implementation

4.5 Lessons Learned and Challenges in MeteoAlarm

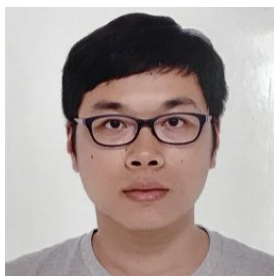


Andreas Schaffhauser is a senior meteorologist at the Austrian National Meteorological Service (ZAMG). He received his master and doctoral degree in meteorology from Innsbruck University in Austria. Andreas worked as researcher in the field of remote sensing, alpine meteorology and snow and avalanches. He joined ZAMG in 2006. His responsibilities included radar meteorology, forecasting, application development and training. Since 2011 he is head of the ZAMGs customer service division. Andreas is responsible for ZAMGs public weather services, climate- and environmental services and is involved in Meteoalarm programme management. Meteoalarm (www.meteoalarm.eu) is an impact-orientated, common framework to aggregate, display and make available authoritative warning information for meteorological and hydrological hazards of EUMETNET members (37 NHMSs across the European domain). Meteoalarm is coordinated by ZAMG and uses CAP as the standard exchange format for warnings.



4.4 HKO's Experience on Implementation and Operation of Alert Hub

Yu Fai Tong is a Scientific Officer of the Service Delivery Division of the Hong Kong Observatory (HKO). He joined HKO in 1997 to develop the HKO Internet website and then worked as a weather forecaster. He is now in charge of the operation and development of Internet weather services of HKO. Mr. Tong is also involved in the system design and development of the World Weather Information Service (WWIS) website for WMO. He is currently working on the implementation project of a Filtered Alert Hub and the revamped Severe Weather Information Centre (SWIC) for WMO.



4.4 HKO's Experience on Implementation and Operation of Alert Hub

Eddie Pang is an Analyst Programmer of the Service Delivery Division of the Hong Kong Observatory (HKO). He joined HKO in 2015 and is responsible for HKO website related development and support. Last year, Eddie started to implement HKO's Alert Hub, the backend system supporting the SWIC 2.0 and WMO Website Widget, by adopting the Filtered Alert Hub. Thanks to Eliot and his team, Eddie has acquired knowledge on AWS Cloud Service and the functions of those products. Recently, he is working on improving the Hub's performance by revamping some of the program flow. It is hoped that the response time of the system can be shortened.

4.10 Research on Other Technologies Relevant to the Filtered Alert Hub



Nuwan Waidyanatha is a Sahana Software Foundation Board Director and a LIRNEasia Senior Research Fellow. He has strong credentials in emergency communication systems; especially, the development and deployment of early warning and first response systems. He is leading the design, development, and implementation of the Sahana Alert and Messaging Broker in Myanmar, Maldives, and the Philippines. For over a decade, Nuwan has been conducting CAP related action research and pilot implementations in the Asia Pacific Region. He has a several peer reviewed publications on the CAP research findings. He has worked with the International Telecommunication Union and LIRNEasia on short term assignments evaluating national emergency communications and advocating CAP: India, Timor-Leste, and Nepal. He applies his Operations Research (Analytics), Computer Engineering, and Systems Theory training, in his work, along with a Social Science touch for delivering practical solutions that make economic sense.