

International EW Conference-Korea 2024
July 10-11, 2024, Seoul Militopia Hotel (draft)

Sept. 5, 2024, Haruko Kawahigashi

Meeting: International EW Conference-Korea 2024

Place: Militopia Hotel (Seongnam, Seoul, Gyeonggi-do)

Date: July 10-11, 2024

Hosted by: ROK Air Force (ROKAF), AOC Korean Chapter, ADD

Participants: Approx. 350 people from the Korean government (military), defense companies, universities, and overseas

ADD: Agency for Defense Development

ADEX: International Aerospace & Defense Exhibition

KIDA: Korea Institute for Defense Analyses

ROKAF: Republic of Korea Air Force

----- Outline of the conference -----

Outline and features of this year's conference

- As an AOC BoD and Japan Chapter secretary, Dr. Kawahigashi was invited to the EW Conference (EW Korea) hosted by the AOC Korea Chapter, where he participated and gave a lecture on "Achieving EMS Superiority through Open Architecture in EW."
- From AOC, President Brian Hinkley, former Region 2 Director Dr. Sue Robertson (UK), Ms. Katherine Head (Australia) were also invited and participated.
- There were about 350 participants in this conference, mainly Koreans (Air Force, companies, research institutes, etc.) but also from overseas, and there were also exhibits (5 Korean companies and 5 overseas companies).
- EW Korea was held at the Militopia Hotel, a Korean military facility near ROKAF Seoul Airport in a suburb of Seoul. It was co-sponsored by the ROK Air Force, the AOC Korea Chapter, and ADD. The Korean electronic warfare community, led by these three organizations, was even more enthusiastic than last year.
- EW Korea 2023 (Oct. 11) was held in a tent as part of Seoul ADEX 2023, an exhibition of ROKAF equipment and instruments, but ADEX is held once every two years, so this year EW Korea was held independently.
- EW Korea itself was larger than last year's event, with more speakers and attendees from abroad. The top leader of the ROK Air Force, who opened the conference, was elevated from last year's Vice Chief of Staff (3-star) to the Chief of Staff (4-star).
- The exhibition was also held in the hallways outside the conference venue and the ballroom, with booths set up by five Korean companies and five foreign companies,

respectively.

- EW Korea has been held almost every year since 2016, but it has been a one-day event. This year, for the first time, it became a two-day event. Tutorials were held in the afternoon of the second day.

--- EW Korea Flow ---

- The official call was held in the ballroom before EW Korea opened, with the presence of Chief of Staff of the ROKAF Lee Young Su (4-star) and the participation of guests and the heads of the co-sponsoring organizations.

- EW Korea opened at 10:30 a.m. After the opening address by the Senior Leaders, an invited lecture (by AOC President Hinkley) and a keynote speech (by the Director of ADD Radar Electronics Technology Center) were given. Before lunch, the exhibitors were pleased to have the 4-star leader's exhibit visit, guided by Chief of Electro-magnetic Warfare Branch. Lunch was served at a banquet in the Grand ballroom for distinguished guests and co-hosting organization heads, and at a reception hall on the second floor of an adjacent wedding hall for the general participants.

- In the afternoon of Day 1, there were two sessions of theme presentations: Session 1: Strategies for Electronic Warfare Development and Session 2: Technological Trends in Electronic Warfare Devices 1, with four and five presentations, respectively. In Day 2, Session 3 was held with 5 presentations. In the afternoon, there was a tutorial (Fundamentals, Principles, and Working Knowledge of Electronic Warfare Equipment) with a two-hour lecture by AOC Sue Robertson and two short presentations by the Korean Air Force.

- On the Day 2, there was a discussion between AOC Korea, AOC HQ, and ROK Air Force officials on the development of AOC Asia 2025 next year.

-Reference sites (in Korean)

EW Korea 2024 (Seoul)

https://crows.or.kr/board_mBrs88/1101

-Reference Site

-EW Korea 2024 (Seoul) 10/19

https://crows.or.kr/board_mBrs88/1101

----- Details -----

--- EW Korea Program ---

(Presentations by foreigners were given in English, and those by Koreans were given in Korean. Simultaneous interpretation was provided, and participants listened to the translation on their personal devices.)

-Official Call by the ROK Air Force

Greetings for distinguished guests and co-hosting organization heads

-Opening Ceremony

National Rites (Salute to the National Flag, Silent Remembrance for those who died in the line of duty)

Opening Address by Lee Young Su (Chief of Staff of ROKAF)

Welcome speech by Lee Geon Wan (President, ADD)

Congratulatory Address by ROK National Assembly (VIDEO)

-Invited Keynote Speakers

"Your AOC-poised for the Future of Battle in the Electromagnetic Spectrum" Brian Hinkley (AOC President)

"Key Elements of Electronic Warfare in the Space Domain to Ensure Electromagnetic Spectrum Dominance" Kim Chan Hong (Director, ADD Radar Electronics Technology Center)

-Exhibition Tour

Escorted by Chief of Electro-magnetic Warfare Branch

-Luncheon

Distinguished guests and co-hosting organization heads: Banquet at Grand ballroom, General participants: Reception Hall IRIS, Self-guided tour of the electronics exhibition booths

--- Theme presentations ---

Session 1: Electro-magnetic Warfare Advancement Strategies (Afternoon of Day 1)

1-1 "A Stealth War between Ukraine and Russia" by Kim Hong Seok (Lt. Col., KIDA)

1-2 "A Holistic Approach to Building EW Capability" Katherine Head (AOC Australia)

1-3 "An AI Algorithm for Next Generation EMW & Radar Systems" Lee Sung Wook (Choongang Univ.)

1-4 "A Way Ahead on Air Force's EMW (focusing on Combat Dev. Comp.)" Oh Yong Deok (ROKAF HQ Lt. Col.)

Session 2: Electro-magnetic Warfare Trend 1 (Afternoon Session on Day 1)

2-1 "PNT, Lessons Learned from Ukraine" John Song (BAE)

2-2 "Airborne EA - Regaining Air Supremacy" Roland Caster (Hensoldt)

2-3 "IVEWC: F16 Next Generation Integrated EMW System" Brian McCarthy (Northrop Grumman)

2-4 "Electronic Surveillance Challenges in a Congested Environment" Sue Robertson (AOC UK)

2-5 "Achieving EMS Superiority through Open Architecture in EW" Haruko Kawahigashi

(AOC Japan)

Session 3: Electro-magnetic Warfare Trend 2 (Morning Session on Day 2)

3-1 "Modulation within Pulse Analysis Tech based on a Machine Learning" Lee Won Jin (LIG Technical Committee Member)

3-2 "Foreign Military EMS Advancement Trend" by Park Sung Gyun (Executive Director, Hanwha)

3-3 "Trend of Test & Measurement using COTS Equipment for Modern EW & EMSO Systems," Kang Se Hoon (Director, Keysight)

3-4 "Technology Trend of RF SoC/Versal AI Engine" Eun Se Young (Director, AMD)

3-5 "Next Generation EW for Fighter Aircraft" Massimo Annulli, Ermini Emanuele (Elettronica)

Session 4 Tutorial Program (Fundamentals, Principles and Working Knowledge of EMW Devices) (Afternoon, Day 2)

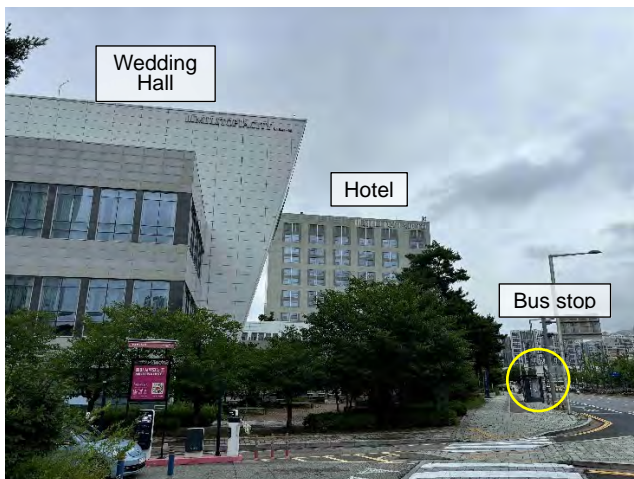
4-1 "Practical ESM System Performance Analysis" Sue Robertson (AOC UK)

4-2 "A Development Procedure for ROKAF's RWR Data" by Kim Ki Hyeon (Captain, ROKAF Aviation Software Support Station)

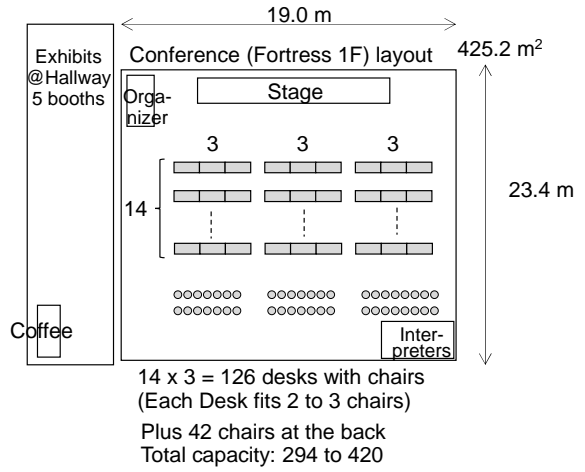
4-3 "A Concept and Application of Jamming" Moon Seok Ho (Major, 29 Squadron, ROKAF)

----- EW Korea Views -----

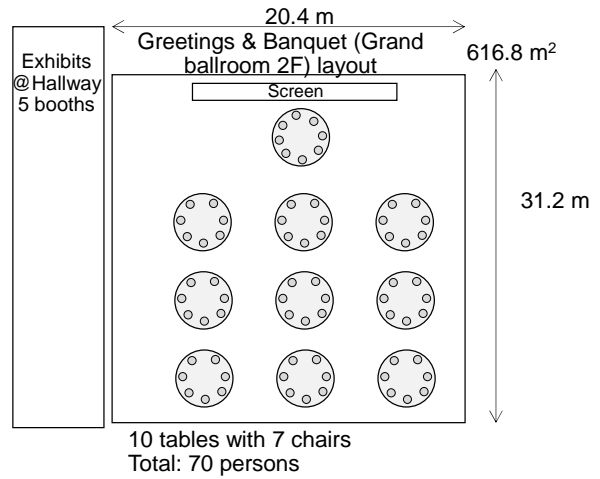
--- Conference Venues ---



Conference Venue view (looking toward east); Militopia Hotel (Far Center), Wedding Hall (Front Left), Bus Stop (Right, Militopia City, Wire Station Prugio Apartment)



Conference at Fortress room (1F) , EW Korea 2024 Conference layout



Greetings at Grand ballroom (2F), EW Korea 2024 Greetings & Banquet layout



AOC keypersons: JS Lim (AOC Korea Chapter President), H. Kawahigashi (AOC Japan), S. Robertson (AOC UK) B. Hinkley (AOC President), K. Head (AOC Australia), JP Kim (AOC Korea)



AOC 2025 Preparatory Discussion by AOC Korea Chapter, ROKAF Maj Courtney Kim and AOC keypersons (M1 room)

--Exhibition at Hallways



Korean Exhibitors (5) outside Fortress Room (1F)



Foreign Exhibitors (5) outside the Grand ballroom (2F)

-- Lunch, Coffee



Banquet Lunch at Grandballroom (2F) (Day1 Distinguished Guests & Co-hosting Organization Heads)





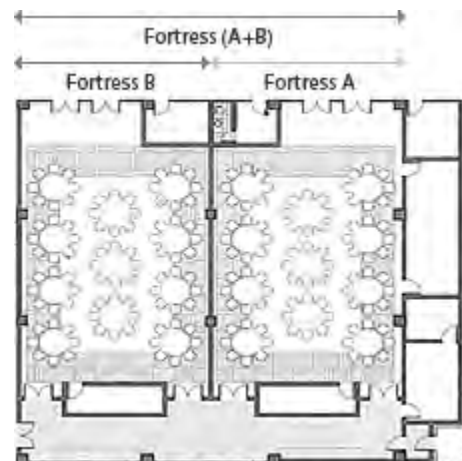
Lunch at IRIS Room (Wedding Hall 2F) (Day1 General Partisipants, Day2 All Participants), and Hallway space of Wedding Hall (Maybe used for exhibition)



Coffee booth (outside of Fortress room(1F))

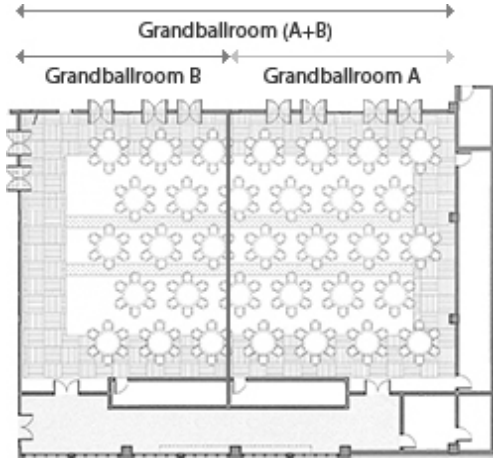
----- Additional Facility Information from HP -----

--- Fortress room (1F) ---



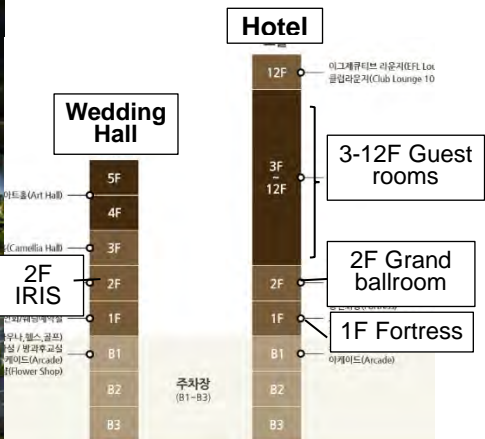
<p>Floor: Fortress room 1F Area: 425.2 m² Size: 23.4 m x 19.0 m</p>	<p>Layouts</p>	 Reception 400	 Theater 400	 Classroom 200	 Round Table 160
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--- Grand ballroom (2F) ---



<p>Floor: Grand ballroom 2F Area: 616.8 m² Size: 31.2 m x 20.4 m</p>	<p>Layouts</p>	 Reception 500	 Theater 500	 Classroom 280	 Round Table 250
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--- Location of Hotel and Wedding Hall ---



Hotel and Wedding Hall, Floor of Hotel & Wedding

--- Plan of AOC2025 (Militopia Hotel) in conjunction with ADEX2025 (Seoul Airport) ---

- **AOC Asia 2025 (EW Korea 2025)**

Venue: Militopia Hotel

83 Wirye-daero, Sujeong-gu, Seongnam-si, Gyeonggi-do, Korea

Dates: At the July meeting, tentative dates were

20 (Mon) – 21 (Tue) Oct.

However, it needs to be re-scheduled since ADEX dates changed.

Proposing dates (by H. Kawahigashi):

28 (Tue) – 29 (Wed) Oct.

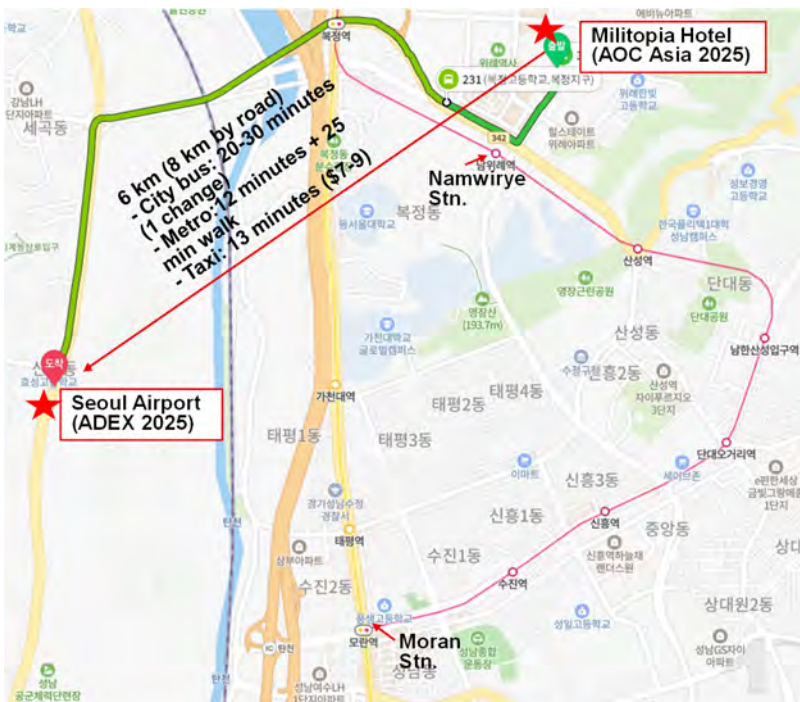
- **Seoul ADEX 2025**

Venue: Seoul Airport

217 Dunjeon-dong, Sujeong-gu, Seongnam-si, Gyeonggi-do, Korea

Dates: **29 (Wed) Oct. – 1 (Sun) Nov. (29-31 Oct. Business, 1-2 Nov. Public)**

(It was scheduled in 21 (Tue) -26 (Sun) Oct. (21-24 Business, 25-26 Public) in July, but the dates changed since then.)



Location of Militopia Hotel (AOC Asia 2025) and Seoul Airport (ADEX2025)

Distance between the two venues is 6 km straight and 8 km by road. Transportation such as chartered minibus or taxi pool will be helpful. Taxi will take about 15 minutes. One chartered bus will provide round trip every 60 minutes.

--- Plan of AOC Asia 2025 (Militopia Hotel) Exhibition ---

-AOC HQ requirement of exhibition space is 600 m². Assuming to use Fortress room (1F) for the conference, Grand ballroom (2F) will provide this space. In addition, hallways outside Fortress (1F) and Grand ballroom (2F) can be used as this year, accommodating 5 exhibition booths / hallway. In addition, adjacent Wedding Hall has plenty of free space, and it may be used. Wedding Hall fee had not been included in the original cost estimation, but it may not to be very expensive since the facility is not used in weekdays for wedding.

-Wedding Hall reception hall IRIS (2F) is used for lunch in EW Korea 2024 in Day 1 and Day 2. So, it is appropriate to provide lunch in AOC Asia 2025 as well.

--- Costs ---

- Cost estimate for 2 days of AOC Asia 2025

- Conference facility \$ 5,000
- Food & beverage \$24,000 (300 attendees)
- Interpreter \$10,000 / day
- Shuttle bus ?
- registration fee \$ 200 / attendee
(150+ free military attendees expected)

- Co-organizer: ROKAF, ADD (tentative)

- ROKAF may pay \$50,000.
- It is important to include 4-star ROKAF leader to obtain ROKAF support.
Formal letters of AOC to ROKAF and to ADD are desirable.

--- Attendees ---

-Not so many international attendees are expected for AOC Asia 2025 as in AOC Annual Symposium or AOC Europe. It may attract people if it is held with ADEX.

-AOC Asia 2025 attendees will attend ADEX 2025, but ADEX 2025 attendees will not attend AOC Asia 2025 except limited EW specialists.

--- Personal opinion about exhibit and attendees (H. Kawahigashi) ---

- Exhibit: ADEX exhibitors mainly consist of Korean big companies (Hyundai, Hanwha, Korean Air etc.), Korean SMEs, International defense companies (Elbit, SAAB, MBDA, IAI etc.), US big companies (Boeing, BAE systems, Northrop Grumman etc.).

The ADEX exhibits are all in large tents and unsettled atmosphere makes it difficult to show demonstrations or talk in depth. Exhibits in Militopia Hotel may be able to take these roles, as is often the case with a small conference accompanying large events.

It is worthwhile to consider providing transportation service between ADEX and AOC Asia venues, so that ADEX attendee attends AOC Asia as well.

- Considerations Regarding Participants from Japan: AOC Asia 2025 is new and may not attract as many people as AOC Europe to attend for business. On the other hand, travel cost from Japan to Korea is reasonable compared to US and Europe, making it attractive as a joyful trip. For that, it is essential to hold it in conjunction with ADEX. Additionally, shopping and sightseeing in Korea are popular among Japanese women, and the participants may increase if the organizers make it convenient for the people to participate with their families. One example is to arrange Korean military-owned hotels in downtown Seoul for accommodation.