



## 세미나

1. 제 목 : SFOL Pulse-High Accuracy DME/N Pulse and Its Impact on Optimizing DME Ground Network for APNT
2. 연 사 : Prof. Kim, Euiho (Department of Mechanical & System Design Engineering, Hongik University )
3. 일 시 : 2017년 7월 4일 (화) 17:00-18:00
4. 장 소 : 서울대학교 301동 1319호 세미나실

### 5. 내 용

The FAA's recently announced 2016 Performance Based Navigation (PBN) National Airspace System (NAS) Navigation Strategy states that it will retain and expand Distance Measuring Equipment (DME/N) infrastructure to help ensure continued Area Navigation (RNAV) service during Global Navigation Satellite Systems (GNSS) outages. The targeted navigation performance using DME/DME in this strategy is RNAV 2.0 in the En Route Domain without requiring Inertial Reference Unit (IRU) and RNAV 1.0 in some large Terminal Areas. It is expected that DME will still play an important role as an alternative RNAV navigation source beyond 2030. It is, therefore, desirable to determine if the performance of DME can be improved to enable PBN of higher navigation accuracy to better meet future air traffic needs. This paper investigates the benefit of a newly developed DME/N pulse using Genetic Algorithms (GA) that can provide much higher ranging accuracy than the conventional Gaussian or Smoothed Concave Polygon (SCP) pulse while meeting the pulse shape requirements in current DME specifications. The primary benefit analysis will compare the achievable DME/DME positioning accuracy with a current DME ground network and compare the DME ground network requirements needed to meet RNAV 0.3 and 92.6 m surveillance positioning accuracy using the conventional Gaussian and the GA-based pulses in selected areas in Conterminous US (CONUS) NAS.

### 6. 약 력 :

2017 - 현재	Assistant Professor of Hongik University
2015 - 2016	Assistant Professor of Cheongju University
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