Prof. Chan Gook Park

- **Education**
  - B.S./ M.S./ Ph.D. Control & Instrumentation Engineering, Seoul National Univ., Korea
- **Experience**
  - 2003 ~ Present: Professor, School of Mechanical & Aerospace Engineering, Seoul National Univ.
  - 2014 ~ Present: Director, Automation and Systems Research Institute, Seoul National Univ.
  - 2014 ~ Present: Director, The Korean Society for Aeronautical & Space Sciences
  - 2014: Co-chair, 2014 IFAC World Congress Estimation and filtering session
  - 2009 ~ 2010: Visiting Scholar, School of Aerospace Eng., Georgia Tech
  - 1998 ~ 1999: Visiting Scholar, Dept. of Mechanical & Aerospace Eng., UCLA
- **Research Interests**
  - Vision / LiDAR-aided Inertial Navigation System
  - INS / GNSS / Vision / TRN Integrated Navigation System
  - MEMS-based Personal Navigation System
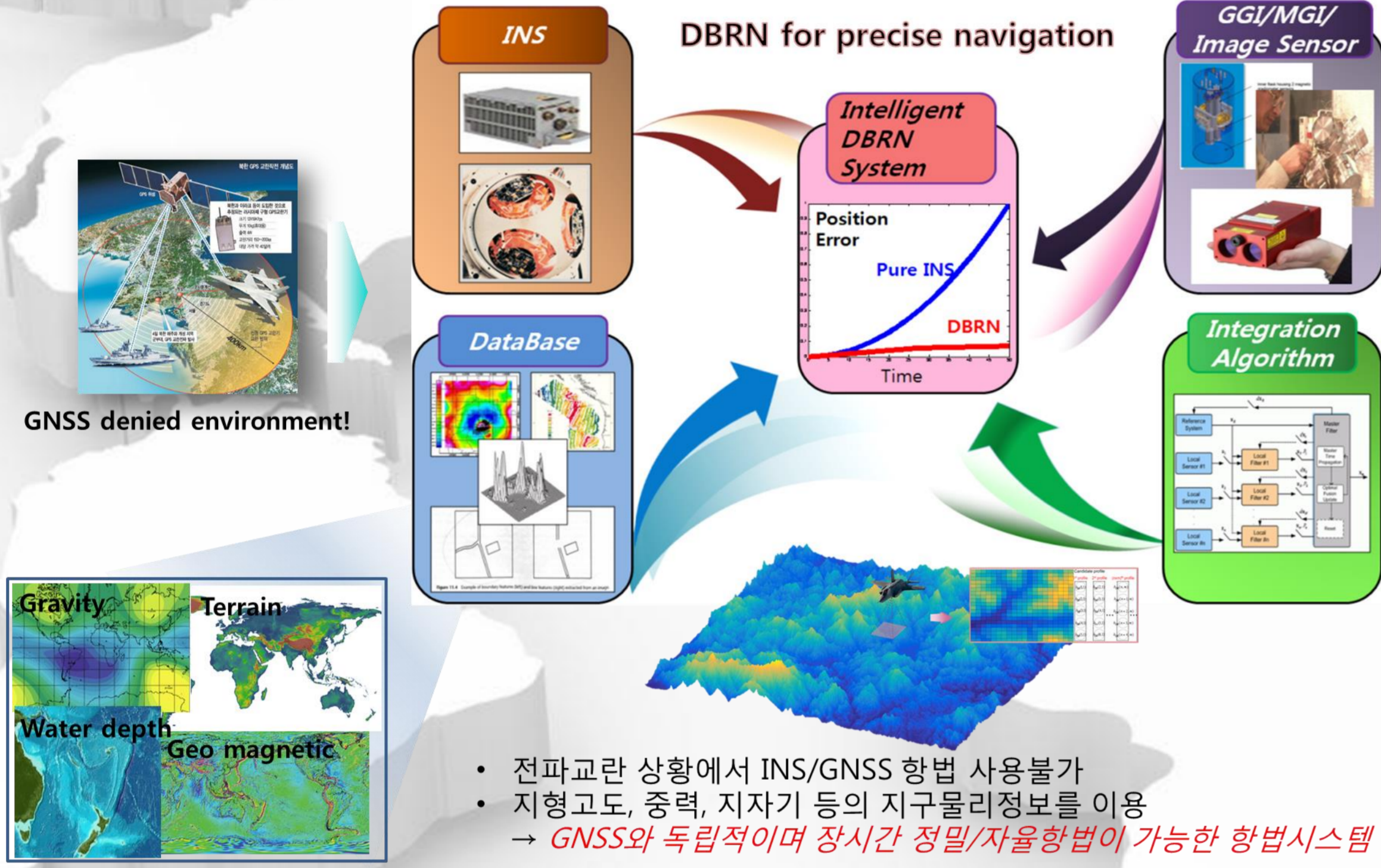 - Multi-Sensor Fusion
  - Advanced Filtering
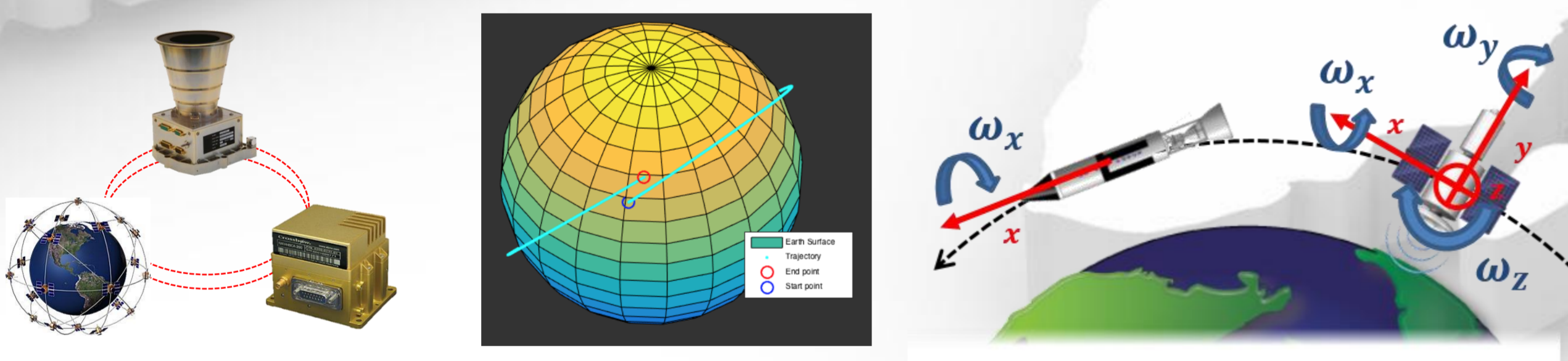

2019 NESL Summer MT

■ Integrated Navigation
– Lunar Lander for high precision and reliability navigation system

– DataBase Referenced Navigation (DBRN)

GNSS denied environment!

- 전파교란 상황에서 INS/GNSS 항법 사용불가
- 지형고도, 중력, 지자기 등의 지구물리정보를 이용
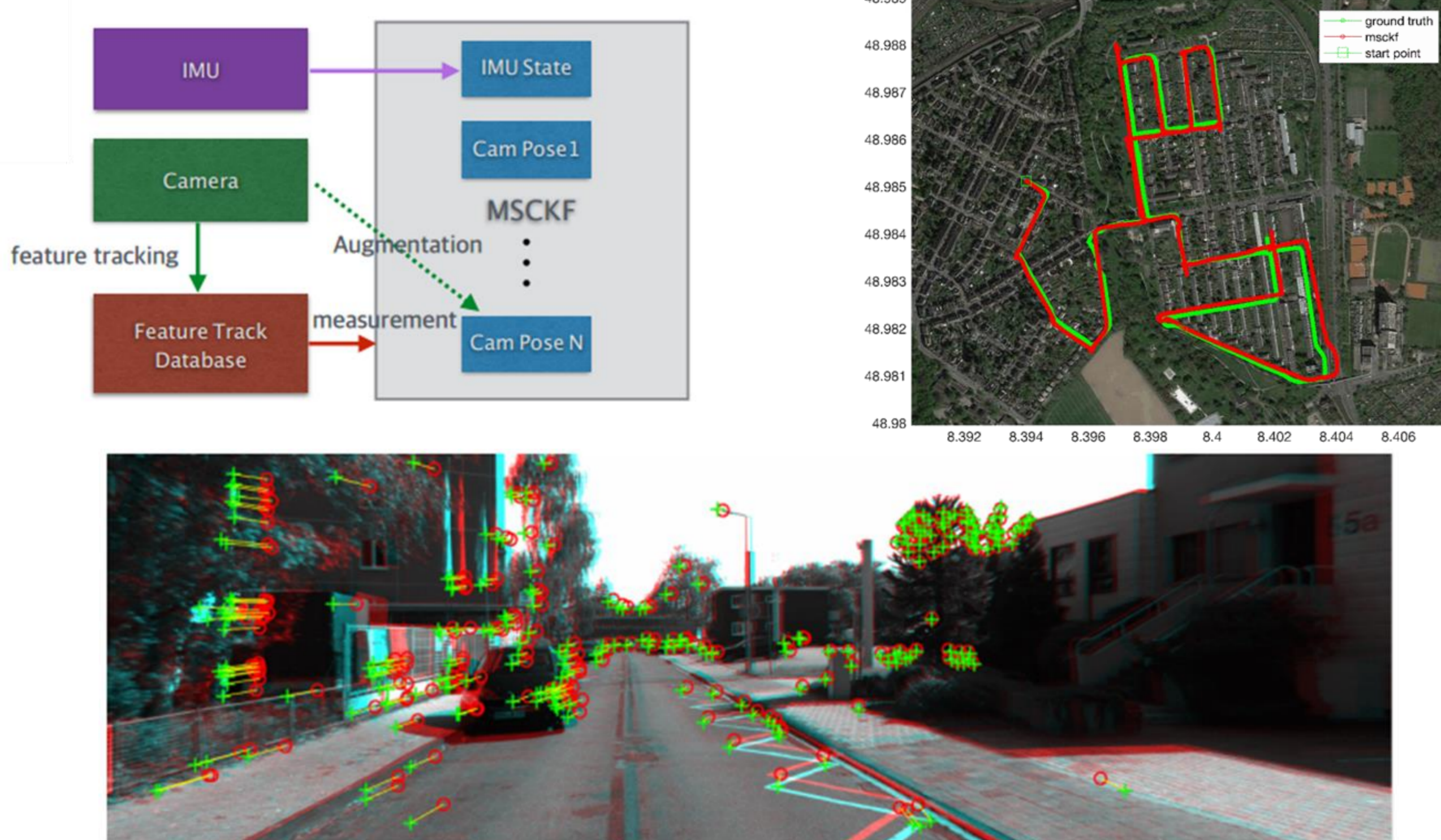 → GNSS와 독립적이며 장시간 정밀/자율항법이 가능한 항법시스템

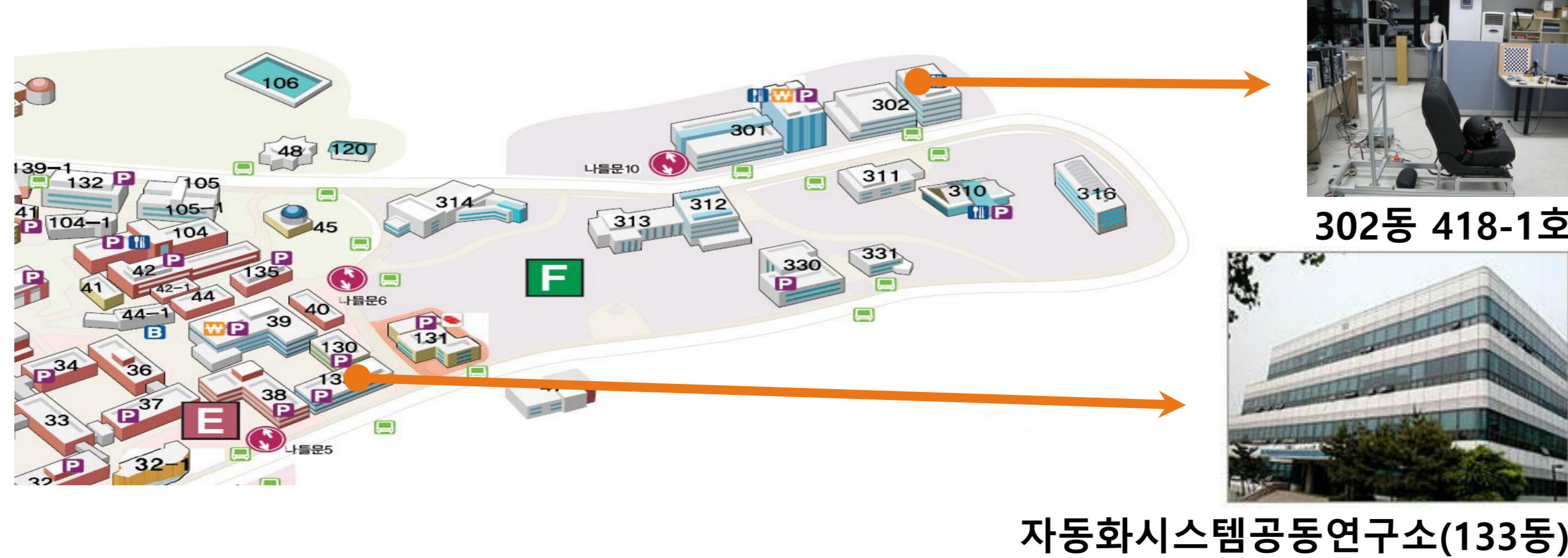– Space navigation system with star tracker / GPS / INS integration

■ Vision-aided Navigation
– Visual inertial odometry using monocular camera
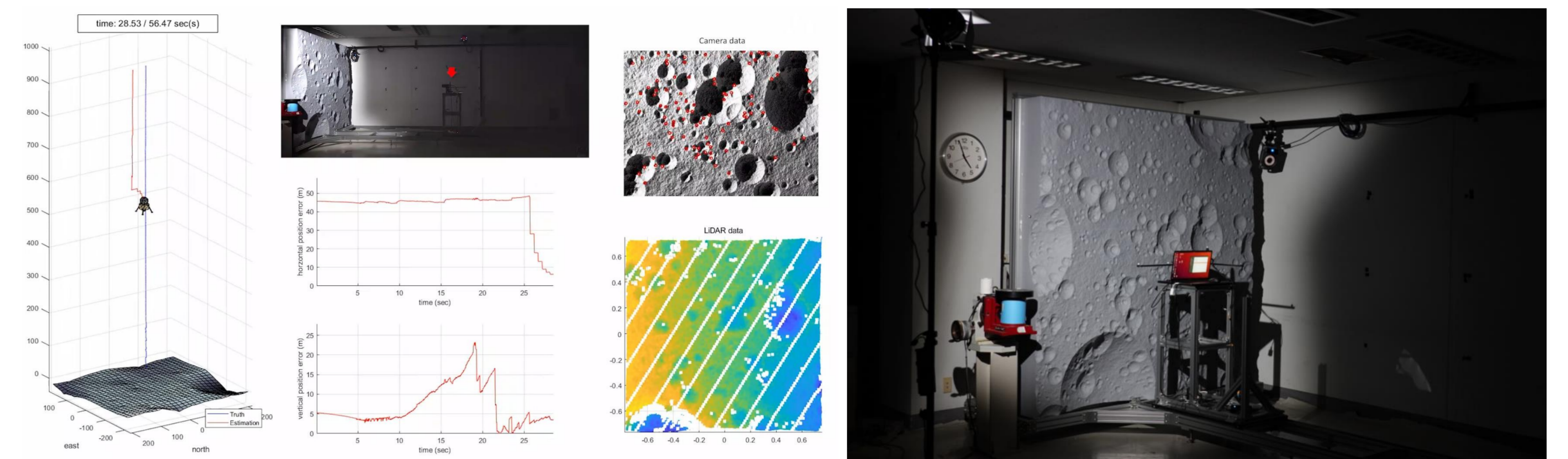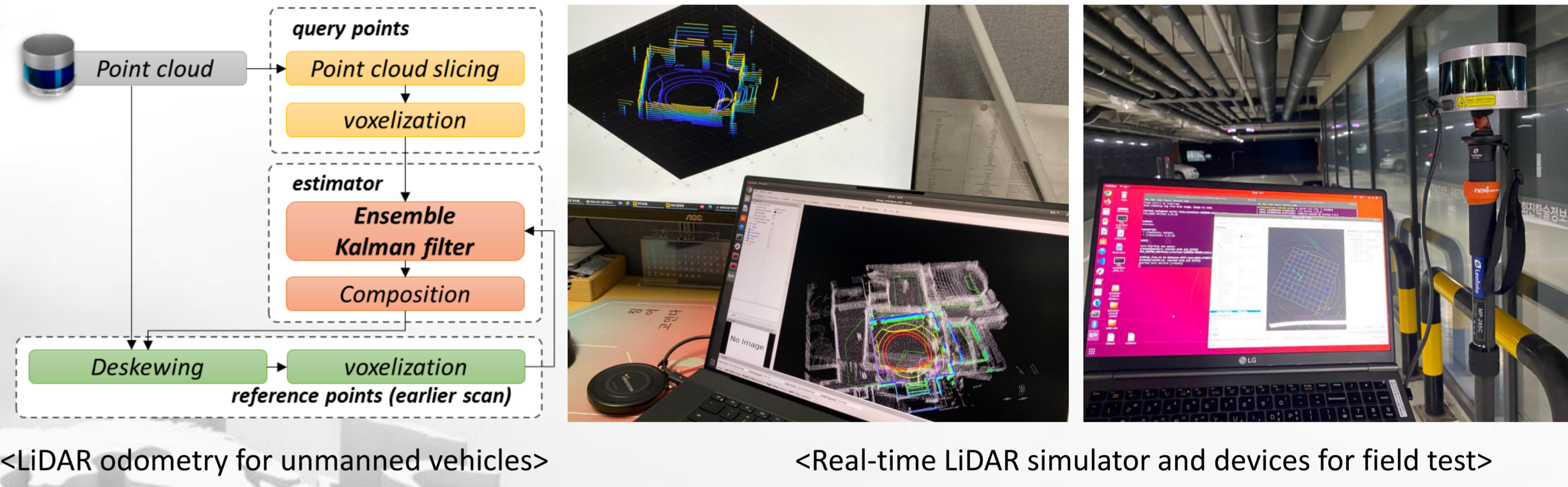

■ LiDAR-aided Navigation
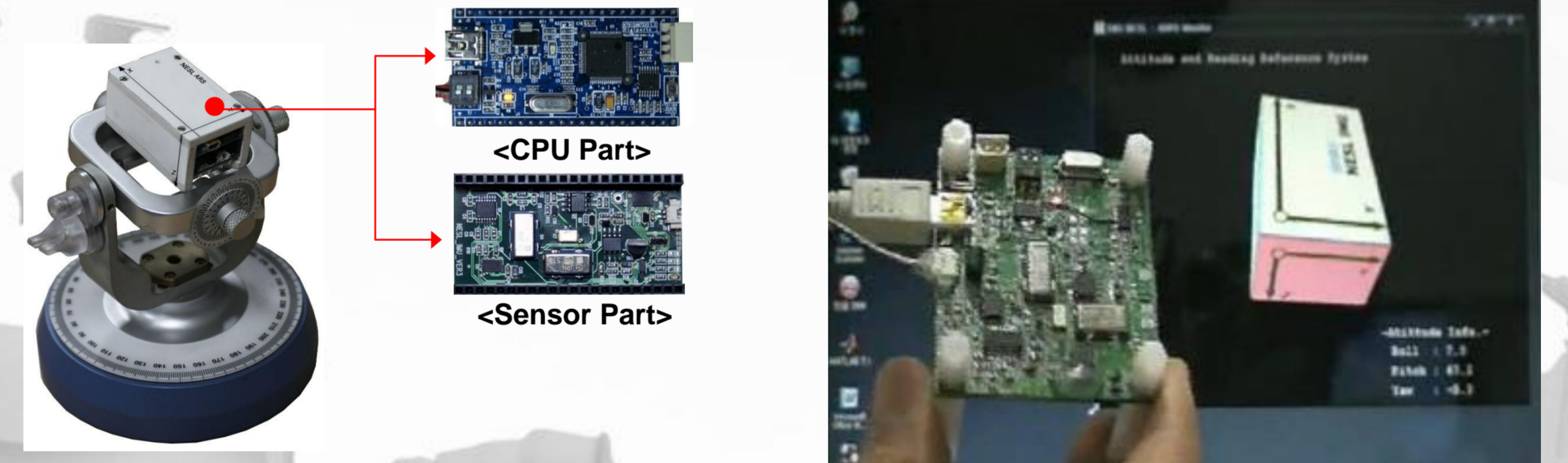– LiDAR SLAM for determining the absolute position of a lunar lander

<LiDAR SLAM for lunar lander> <Lunar lander navigation testbed >

– LiDAR SLAM for unmanned vehicles

<LiDAR odometry for unmanned vehicles> <Real-time LiDAR simulator and devices for field test>

■ Pedestrian Dead Reckoning(PDR)
– AHRS(Attitude Heading Reference System) Module

<CPU Part> <Sensor Part>

– Pedestrian Navigation System

Mobile Navigation   **PDR for First Responder**

You Tube KR   SNU NESL PDR
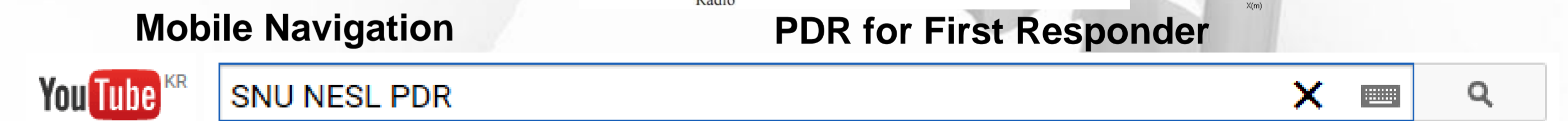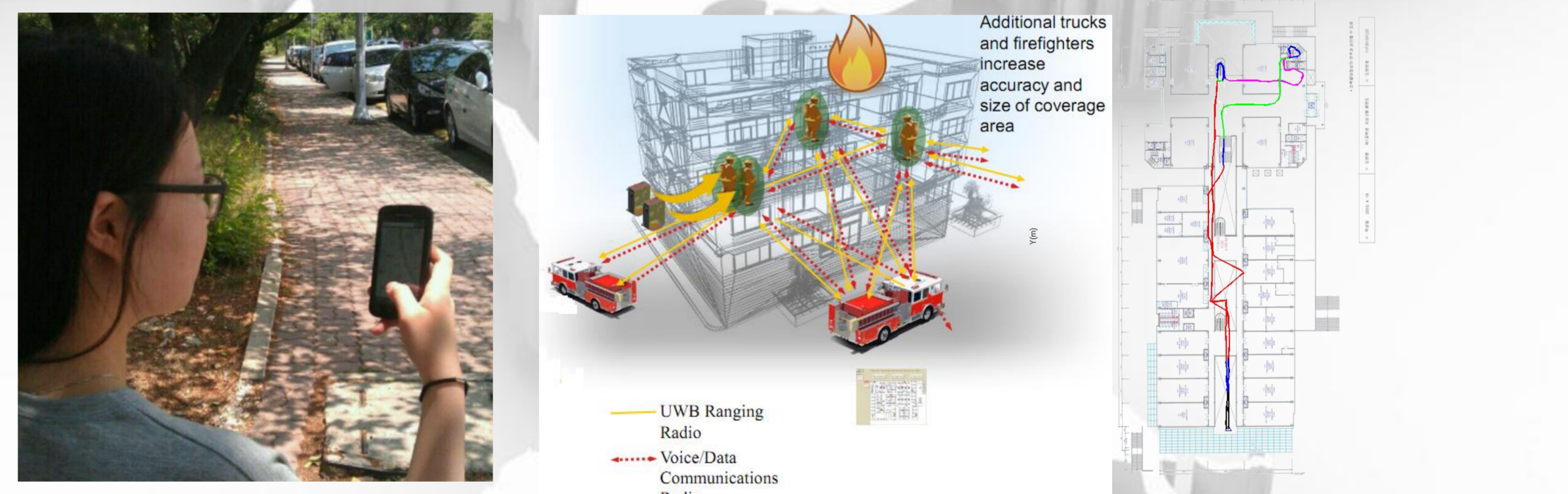
– **Winner of the International Indoor Navigation Competitions for 5 consecutive years**

Error (3rd quartile)

Twice more accurate

SNU-NESL Rep. of Korea	TLBS China	STEPS Israel	YNU-MCL Rep. of Korea	Indora Slovak Republic	Mitlab Taiwan
3.8	7.4	13	>25	>25	>25

■ NESL Location

302동 418-1호

자동화시스템공동연구소(133동)

■ Alumni