Status of the KPS
in 2021

20 September 2021

과학기술정보통신부
Ministry of Science and ICT

Overview of KPS

Objectives

Providing high-precision PNT information required in the era of the 4th industrial revolution

Goals

Development and construction of KPS system

that stably provides 6 PNT services to meet various satellite navigation needs

KPS Services

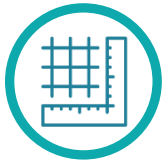
Open Service

- To provide PNT services free of charge
- Signals : L1/L2/L5/L6/S

Meter Level Service

- To provide correction data for meter-level accuracy
- Signals : L1

Centimeter Level Service



- To provide correction data for centimeter -level accuracy
- Signals : L6

SBAS Service

- To broadcast KASS(SBAS) data
- Signals : L1/L5

Public Safety Service

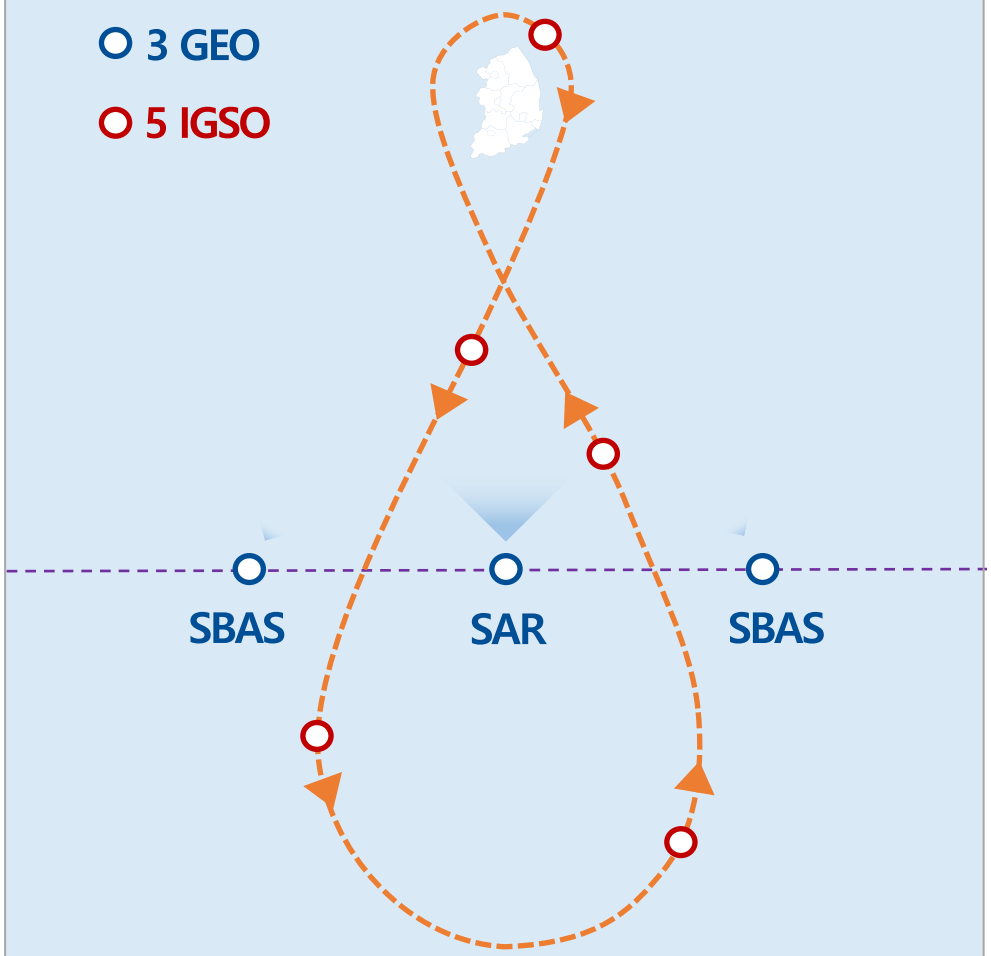
- To provide PNT services for government -authorized users
- Signals : L6/S

Search and Rescue Service

- To relay rescue signal to COSPAS -SARSAT facilities
- Signals : L

KPS System Configuration

KPS Satellite Constellation



KPS Segments

Space

- 3 GEO Satellites
- 5 IGSO Satellites
- Payloads : Navigation, Time-sync., SBAS, and SAR

Ground

- Operation Centers
- Satellite Control Centers
- Antenna Stations
- Monitoring Stations
- Mission Control Stations for MLS/CMLS

User

- Research and Development Receiver
- Reference Station Receiver
- Test and Evaluation Receiver
- User Receivers

KPS Development Plan

System Design ('22~'24)

- SDR/PDR/CDR of KPS system
- International cooperation for orbits, frequencies acquisition
- Navigation signal and constellation design

System Development ('25~'28)

- Development of satellite bus and payloads
- Development of satellite control center and antenna station
- Launch of the 1st IGSO satellite in 2027

Deployment and Validation ('29~'35)

- Development and launch of the 4 IGSO and 3 GEO satellites
- Development of all of the ground segment
- Test during IOC and FOC

Thank you

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