

KT Satellite Business

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I. KT Capacities

II. Koreasat Services

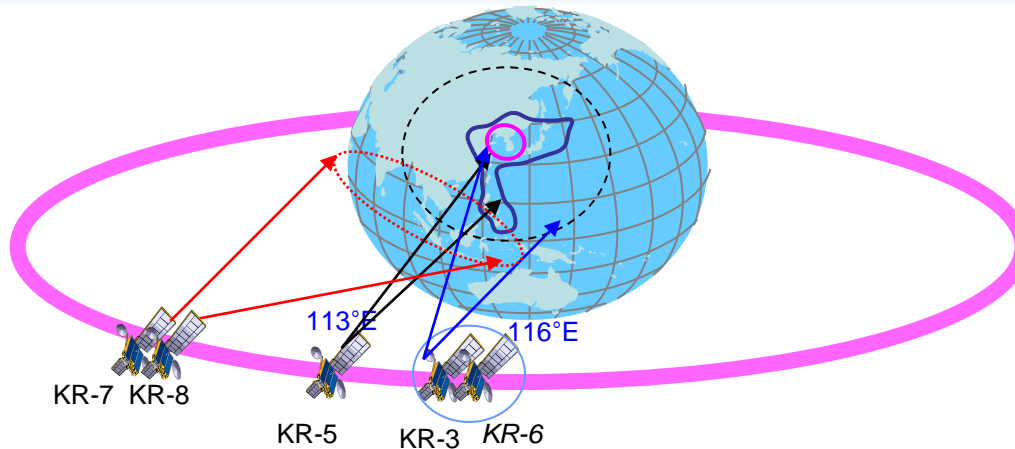
III. International Services



I. KT Capacities

Koreasat Fleet

- Koreasat 1 was launched in 1995 and de-orbited in December 2005.
- Koreasat 2 at 75°E, Koreasat 3 at 116°E and Koreasat 5 at 113°E
- Koreasat 6 satellite is to be launched in 2010 replacing Koreasat 3



Koreasat-7

- Orbital Location : 75 East
- Launch Date : 1999

Koreasat-8

- Orbital Location : 75 East
- Expected Launch Date : 2013

Koreasat-2

- Orbital Location :
- Launch Date : January, 1996
- Manufacturer : Lockheed Martin
- Launcher : Delta II
- Launch Mass : 1,459 kg
- Life time : 10 years
- Transponders : FSS (12), DBS (3)

Koreasat-3

- Orbital Location : 116 East
- Launch Date : September 1999
- Manufacturer : Lockheed Martin
- Launcher : Ariane IV
- Launch Mass : 2,800 kg
- Life time : 12 years
- Transponders
 - Ku band : FSS (24), DBS (6)

Koreasat-5

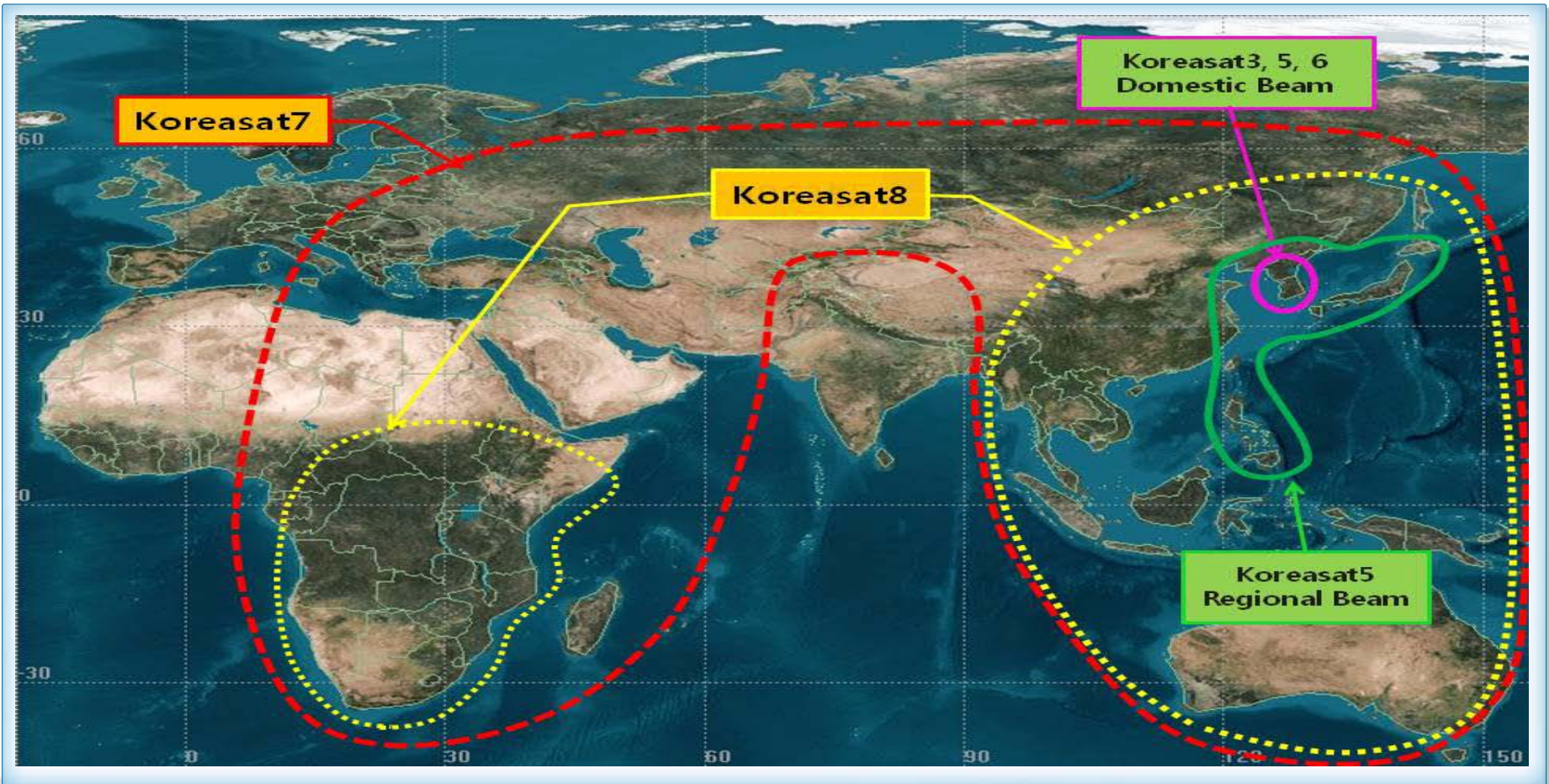
- Orbital Location : 113 East
- Launch Date : August, 2006
- Manufacturer : Alcatel
- Launcher : Sea Launch
- Launch Mass : 4,500kg
- Life Time : 15 years
- Transponder : FSS(24)

Koreasat-6

- Orbital Location : 116 East
- Launch Date : November 2010
- Manufacturer : OSC
- Launcher : Ariane 5
- Launch Mass : 2,800kg
- Life Time : 15 years
- Transponder : FSS(24), DBS(6)

※ Replacement for K3

- 4 C-band Transponders on Koreasat-7(ABS-1) covers Asia, Middle East and Africa
- 4 C-band, 4 Ku band Transponders on Koreasat-8(ABS-2, to be launched by 1Q 2013) would cover SE Asia and Africa.
- Wide range of services including DTH, Cable TV distribution, VSAT services, Data networks and Telecommunication services are available.



I. KT Capacities

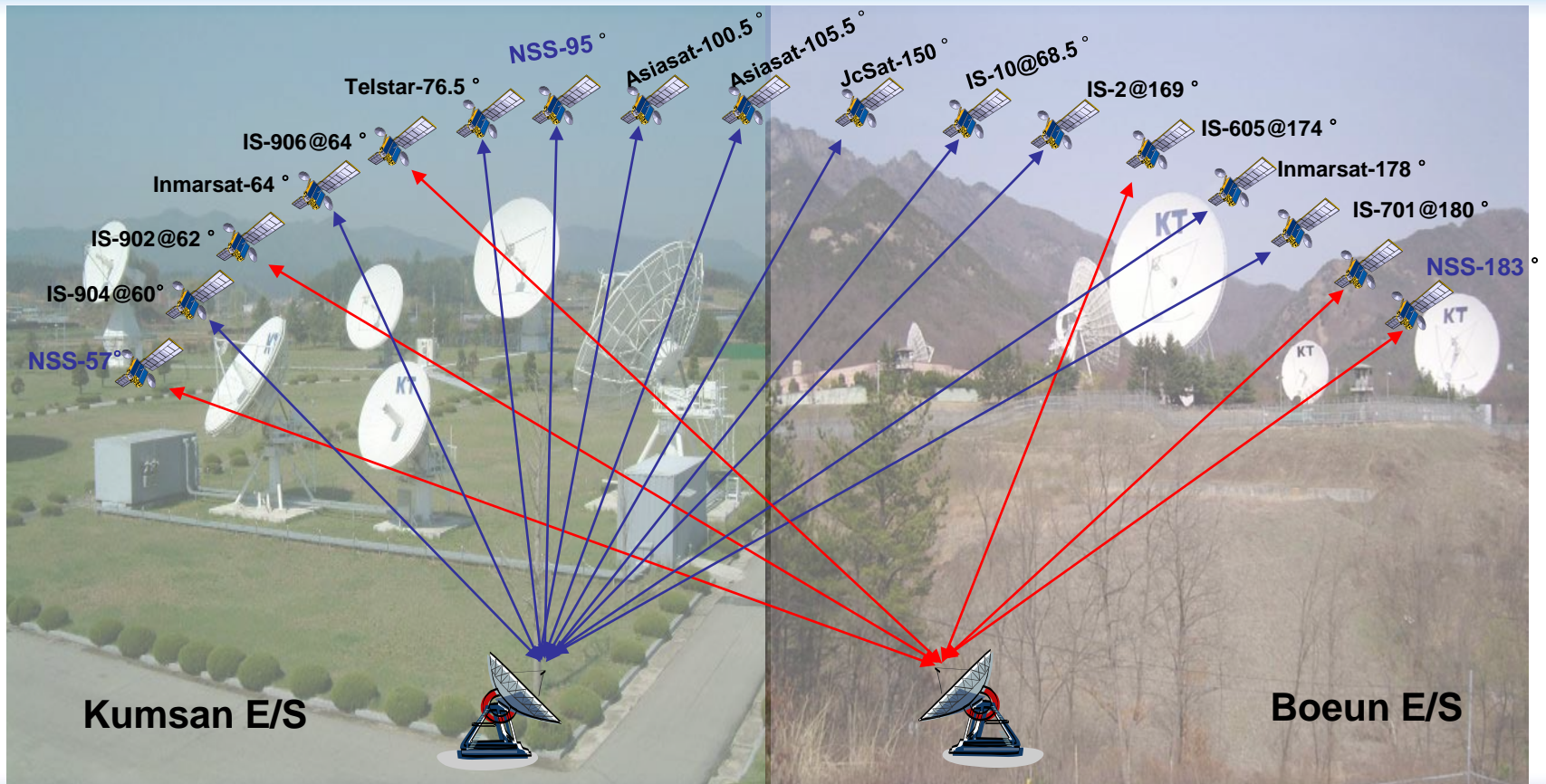
Domestic Satellite Connections

- KT has two SCC (Satellite Control Center) for Koreasat Fleet
- Seven domestic branch sites to cover a nationwide service

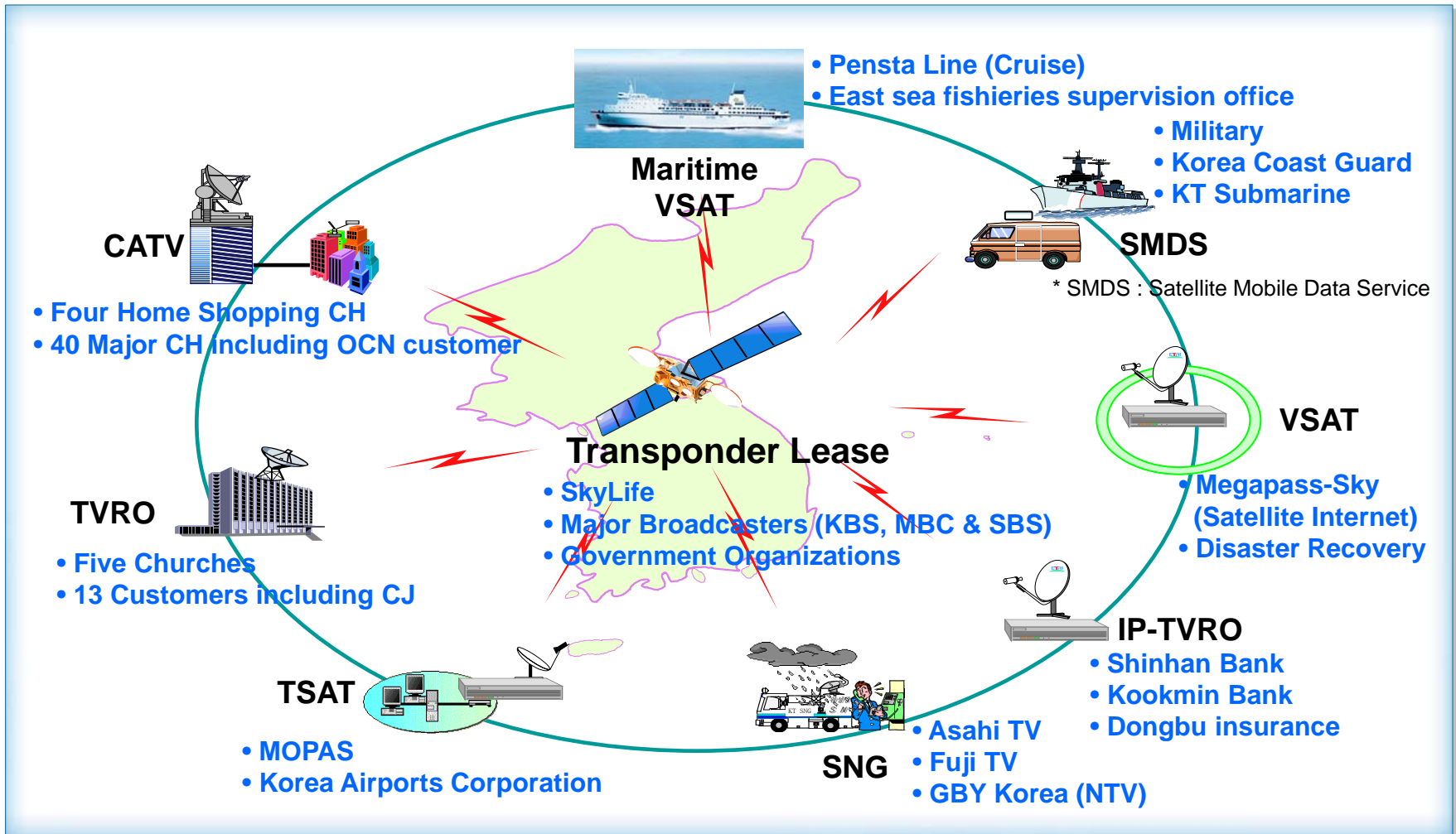
| Service | Station | Facillities |
|--------------------------|----------------------|---------------------------------|
| Satellite Control Center | Yongin Primary SCC | Three Antennas (11M, 9M & 7.2M) |
| | Daejeon Backup SCC | Two Antennas (11M FMA & 6.4M) |
| Satellite Service | Gwangjin E/S (Seoul) | Two Antennas (9M & 3.7M) |
| | Seongsu E/S (Seoul) | Two Antennas (9M & 3.7M) |
| | Yongin E/S | 9M Antenna |
| | Daejeon E/S | Two Antennas (6.4M & 4.6M) |
| | Taegu E/S | 6.4M Antenna |
| | Busan E/S | 6.4M Antenna |
| | Gwangju E/S | 6.4M Antenna |



- KT provides global satellite services using Intelsat, Telesat, SES, Asiasat, etc.
- Operating 22 antennas for global services covering Africa, Europe, all Asia



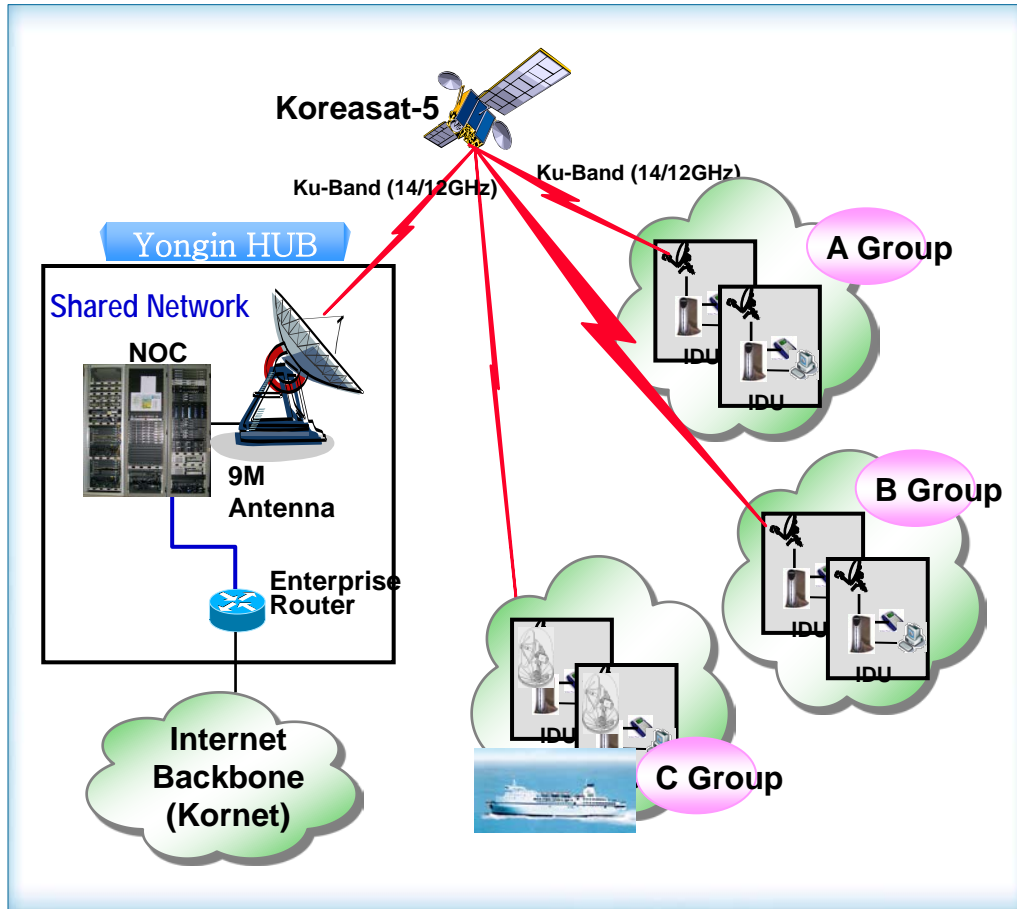
- Current major services are CATV/TVRO, VSAT, transponder lease, etc.



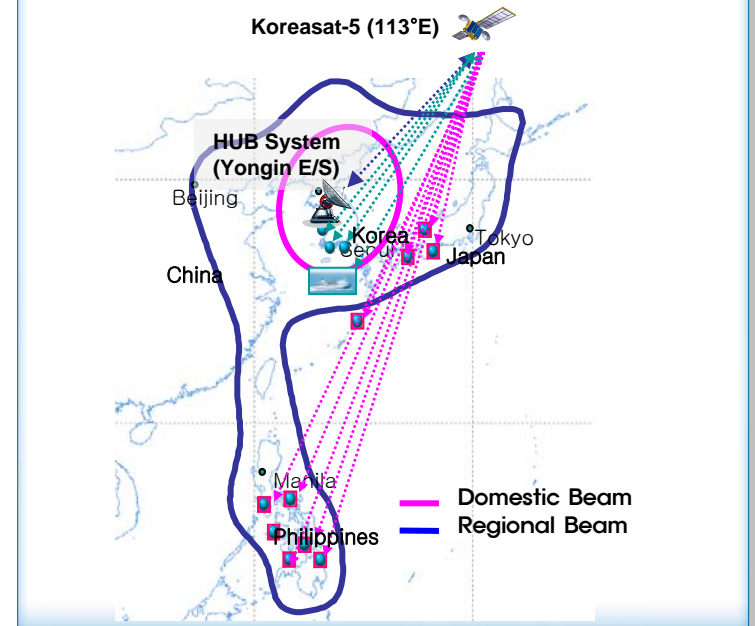
II. Koreasat Services

Regional Services

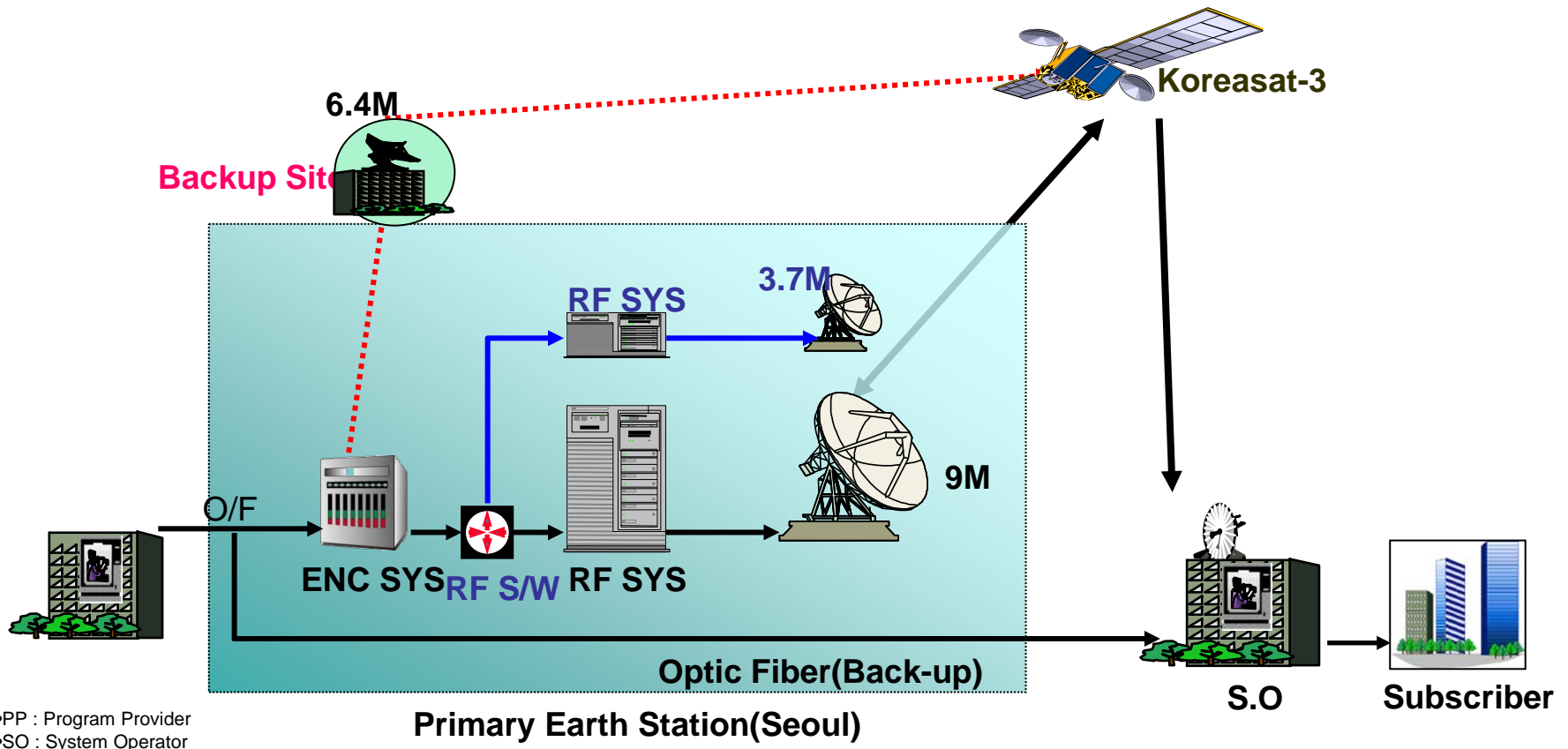
- Maritime VSAT service for the ships via Koreasat-5 regional beam.
- New regional VSAT and DTH services: Philippines.



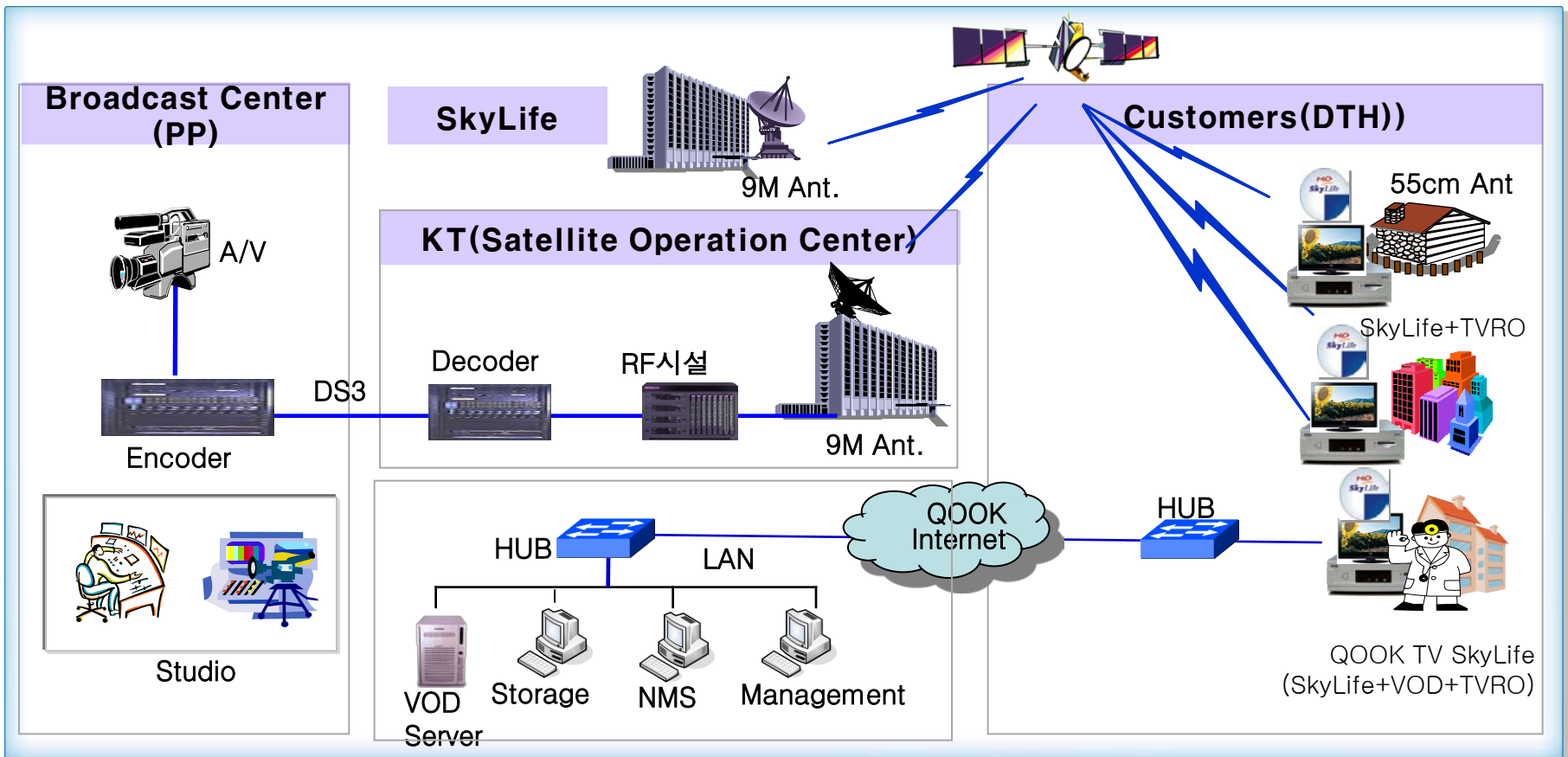
| Service | Customer |
|---------------|---------------|
| Maritime VSAT | Eastern Dream |
| VSAT Internet | Philippines |
| Education | Philippines |



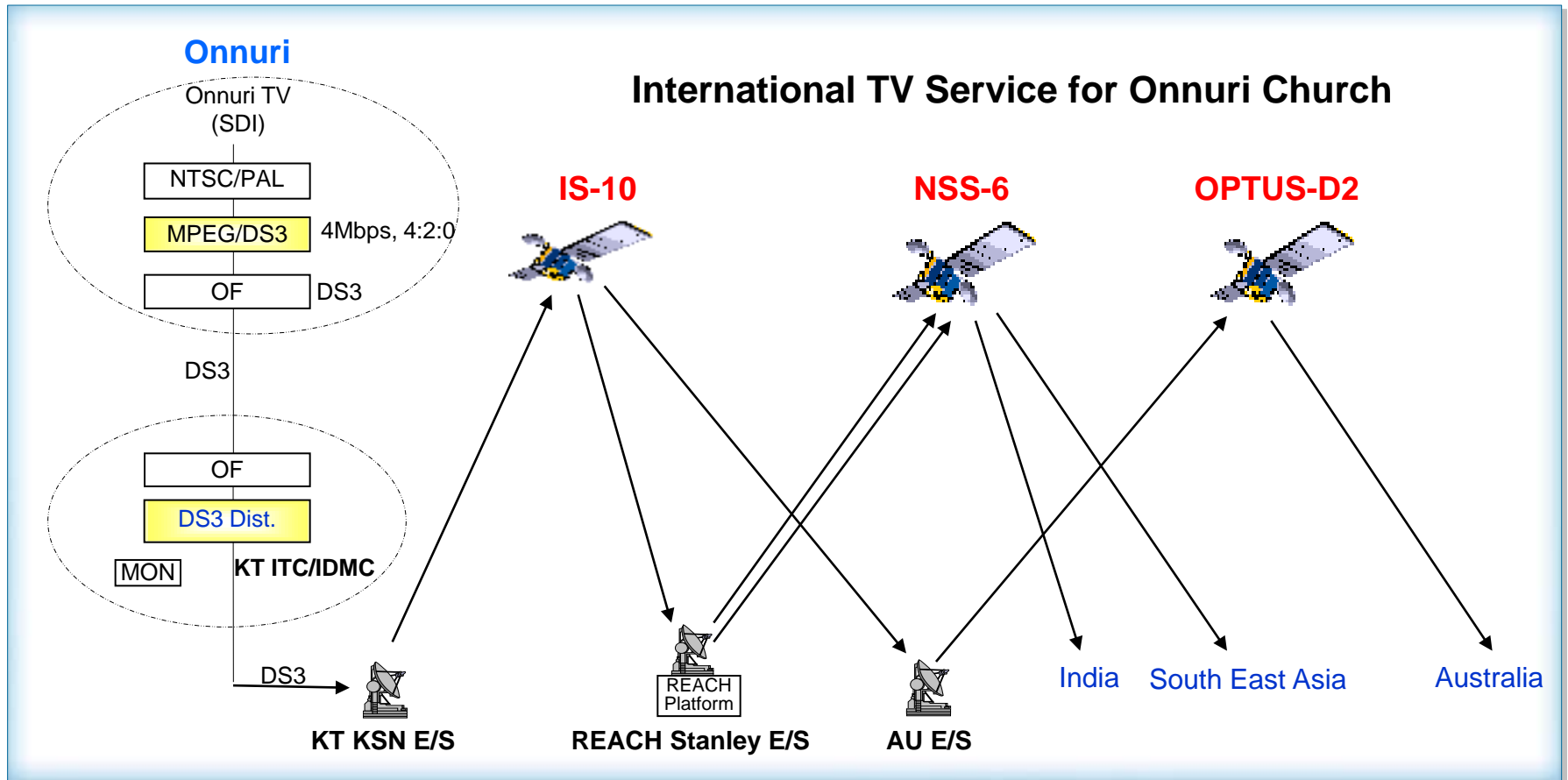
- TV programs distribution to regional CATV broadcasting stations or customer branches
- Applications: Home Shopping, Corporate TV Broadcasting and Remote Education



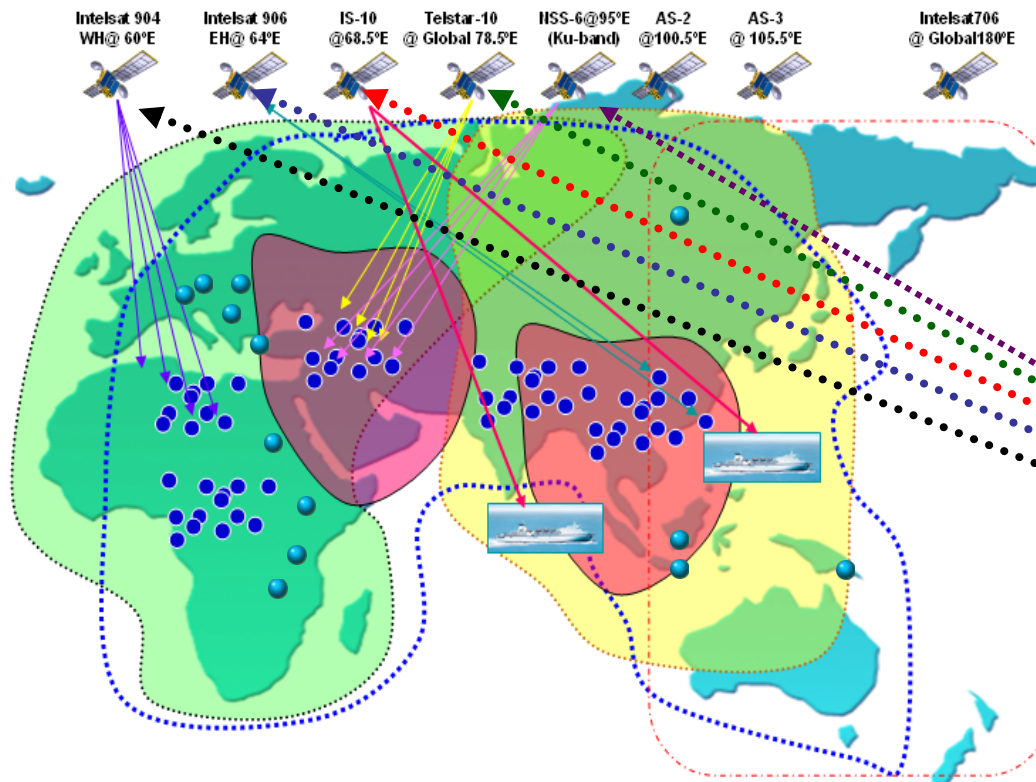
- KT is to provide the Hybrid TVRO service in partnership with SkyLife
- Customers watch SkyLife TV Channels, simultaneously specific channel for customer



- KT has begun International TV service (occasional) to customers home and abroad since 1970, especially such as Olympic, Asian games and Worldcup Soccer game, etc.
- KT is providing the leased line TV services for MBC, Arirang TV and CGNTV.



- KT provides all kinds of global satellite services such as voice, dedicated line, data, video, Inmarsat, fixed and maritime VSAT over the world.
- Service coverage: Asia, India, Middle East, Europe and Africa

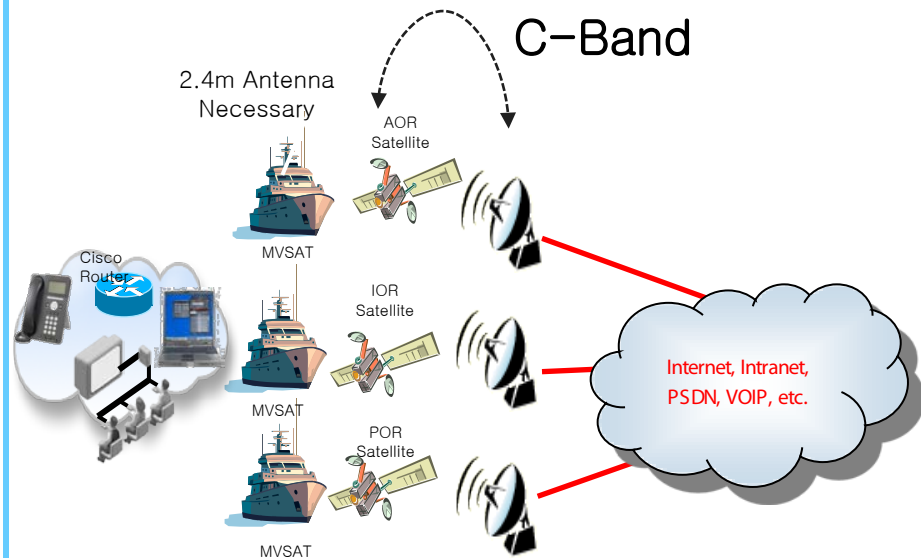


| Service Area | Major Customer |
|--------------|---|
| East Asia | Government & Enterprise |
| Middle East | Military & Enterprise (Constructions) |
| Africa | Government & Enterprise (Constructions) |
| Europe | Government & Enterprise |

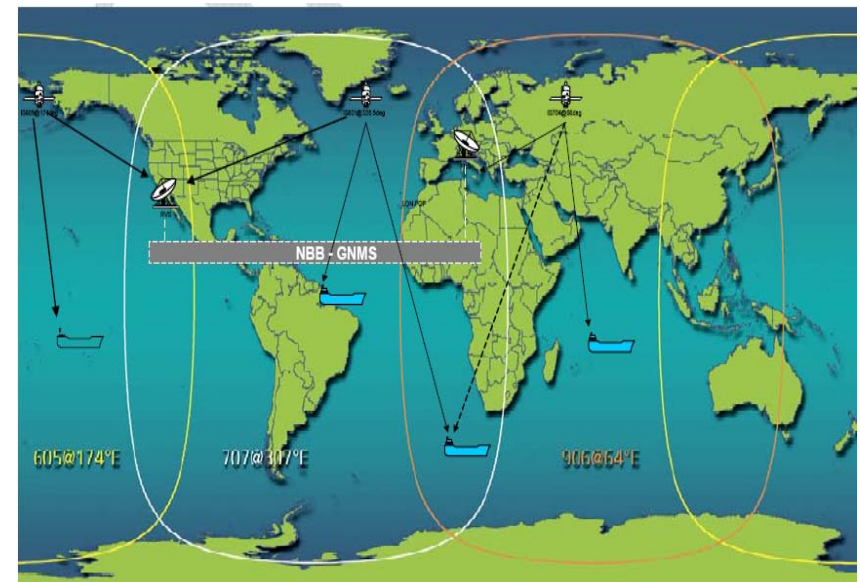


- **Global Coverage:** Provides seamless satellite communications service in Pacific, Indian, and Atlantic Ocean with automatic beam switching using C-band global beam satellites
- **Supports Communications and Fleet management applications**
 - Internet, VoIP, VPN, Real time info exchange, Troubleshooting, Cargo information, etc.

Network Connectivity



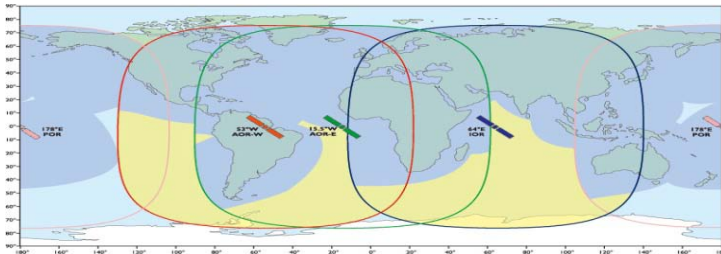
Service Coverage



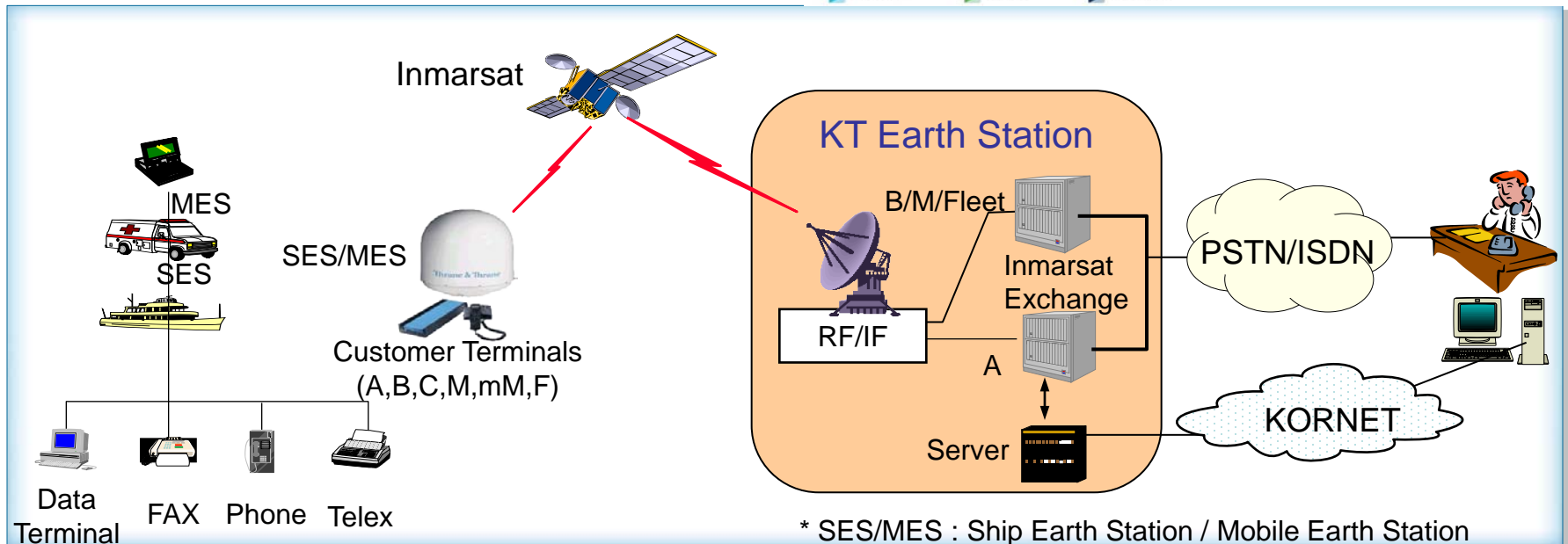
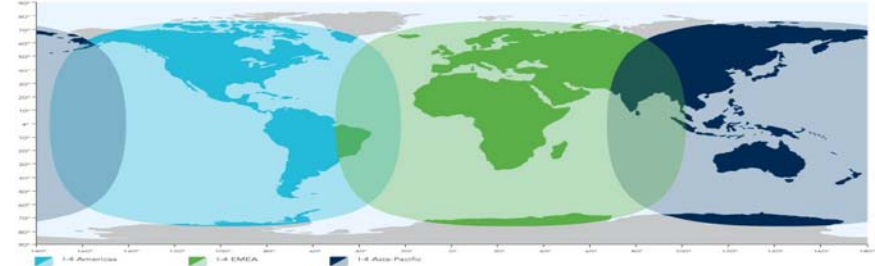
New Generation Services: BGAN and FB (Up to 432 Kbps)

- **BGAN (Broadband Global Area Network):** land mobile service with global satellite Internet network access using portable terminals for the users in the land. The terminal can be used anywhere line-of-sight exists.
- **FB (Fleet Broadband):** maritime service to provide broadband data and voice simultaneously.

Existing Inmarsat Satellite



New Generation Satellite



III. International Services

GSPS(Global Satellite Phone Service)

- Mobile satellite phone service available anywhere you can see the sky
- Global coverage through Inmarsat's 3 earth stations(Hawaii, Italy, Philippine)

