



Status of the Far East Radionavigation Service (FERNs)

ILA 34th Annual Convention

18TH, OCT., 2005

PROFESSOR. Ph. DR. SEUNG-GI, GUG

KOREA MARITIME UNIVERSITY



Schedule of FERNs



The 14th Session of the Council

1. Date: 24th-28th, October 2005

2. Where : Hyatt Regency

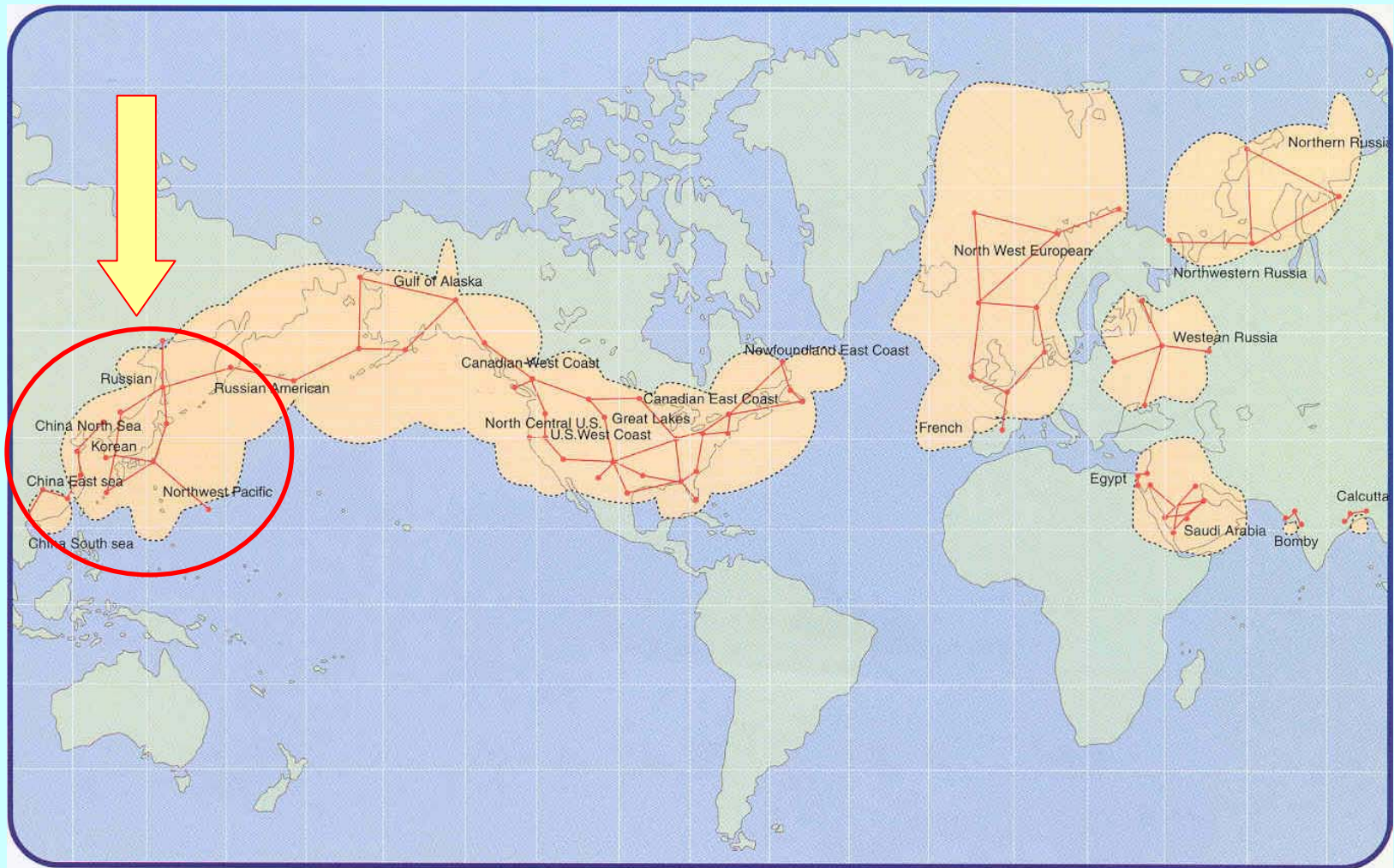
Jeju (Cheju), Korea

FERNS chains

Station (nation)	LOCATION (WGS 84) Power	Russia chain GRI 7950	Korea chain GRI 9930	North West Pacific chain GRI 8930	China North Sea chain GRI 7430	China East Sea chain GRI 8390	China South Sea chain GRI 6780
Petropavlovsk (Russia)	53° 47' 47.584" N 157° 41' 42.900" E 700 kW	Secondary 3506.50 μ s* CD 11000 μ s					
Alexandrovsk (Russia)	51° 04' 42.805" N 142° 42' 04.932" E 700 kW	Master					
Odhotak (Russia)	59° 25' 02.050" N 143° 05' 22.916" E 10 kW	Secondary 3102.50 μ s CD 61000 μ s					
Usuriysk (Russia)	44° 31' 59.702" N 131° 38' 23.403" E 700 kW	Secondary 3678.00 μ s CD 30000 μ s	Secondary 3162.44 μ s CD 51000 μ s				
Tokushima (Japan)	42° 44' 37.214" N 143° 43' 09.737" E 600 / 1000 kW	Secondary 3104.15 μ s CD 46000 μ s		Secondary 3349.53 μ s CD 50000 μ s			
Nijima (Japan)	34° 24' 11.943" N 139° 16' 19.473" E 1000 kW		Secondary 3085.64 μ s CD 37000 μ s	Master			
Minamitorishima (Japan)	24° 17' 08.607" N 153° 58' 53.779" E 1100 kW			Secondary 6051.53 μ s CD 30000 μ s			
Gonshi (Japan)	26° 36' 23.038" N 128° 08' 56.920" E 600 / 1000 kW		Secondary 3563.52 μ s CD 22000 μ s	Secondary 4580.86 μ s CD 11000 μ s			
Pohang (ROK)	36° 11' 05.450" N 129° 20' 27.440" E 150 kW		Master	Secondary 3085.64 μ s CD 70000 μ s			
Kwangju (ROK)	35° 02' 23.996" N 126° 32' 27.295" E 50 kW		Secondary 946.97 μ s CD 11000 μ s				
Hailong (China)	42° 43' 11.562" N 129° 06' 27.213" E 1200 kW				Secondary 2652.32 μ s CD 28000 μ s		
Rongcheng (China)	37° 03' 51.765" N 122° 19' 25.954" E 1200 kW				Master	Secondary 2459.70 μ s CD 29000 μ s	
Xuancheng (China)	31° 04' 07.937" N 118° 33' 09.623" E 1200 kW				Secondary 2459.70 μ s CD 11000 μ s	Master	
Raoping (China)	23° 43' 25.941" N 116° 53' 44.826" E 1200 kW					Secondary 2793.52 μ s CD 11000 μ s	Secondary 1764.69 μ s CD 12700 μ s
Hexian (China)	23° 58' 03.847" N 111° 43' 10.298" E 1200 kW						Master
Chongguo (China)	22° 32' 35.452" N 107° 13' 21.663" E 1200 kW						Secondary 1623.76 μ s CD 25300 μ s

note. * Second line is the base line length in μ s

FERNS chains





Agenda Content-1

- 1. Opening of the session.**
- 2. Adoption of the agenda.**
- 3. Presentation of reports by each country on the Loran-C/Chayka programme.**
- 4. Operational matters for FERNS co-operating chains.**
- 5. Technical matters for FERNS co-operating chains.**



Agenda Content-2

- 6. Co-ordination of other radionavigation services in the Far East:**
- 7. Any other business.**
- 8. Date and venue of the 15th session.**
- 9. Closing of the session.**



Agenda Details

1. Opening of the session

1) Members: The People's Republic of China

Japan

The Republic of Korea

The Russian Federation

2) Observers: IALA, NELS

List of Participants

China (5)	Mr. Han Wei	Director, Division of Aids to Navigation and Hydrography, China Maritime Safety Administration
	Mr. Liu Zhihao	Senior Engineer, China Maritime Safety Administration
	Mr. Xu Chunming	Senior Engineer, China Maritime Safety Administration
	Mr. MA Jinshe	Deputy Director, Science and Technology Center of Aids to Navigation and Hydrography, Tianjin Maritime Safety Administration
	Mr. Li Yue	President, Xi'an Research Institute of Navigation Technology
Japan (2)	Mr. Koji Mimura	Director, Aids to Navigation Management Division, Maritime Traffic Department, JCG
	Mr. Masashiro Takano	Senior Engineering Officer, Aids to Navigation Engineering Division, JCG
Russia (4)	Mr. Victor Tsarev	Director, Internavigation RTC
	Mr. Anatoly Argunov	Deputy Director, Internavigation RTC
	Mrs. Elena Tsikalova	Chief Division, Internavigation RTC
	Mr. Vadim Zholnerov	Deputy Director, Russian Institute of Radionavigation & Time
Korea (6)	Mr. Chung Il-Young	Director General, Maritime Safety Management Office, MOMAF
	Mr. Lee Jang-Woo	Director, Aids to Navigation Division Maritime Safety Management Office, MOMAF
	Mr. Ahn Jong-Ryeol	Deputy Director, Aids to Navigation Division Maritime Safety Management Office, MOMAF
	Mr. Lee Seung-Jae	Assistant Director, Aids to Navigation Division Maritime Safety Management Office, MOMAF
	Mr. Gug Seung-Gi	Professor, Department of Maritime Police Science, KMU
	Mr. Chung Se-Mo	Professor, KMU
IALA (2)	Mr. Torsten Kruuse	Secretary General, IALA
	Mr. Peter Edwin Kent	Technical Representative, IALA
NELS(1)	Mrs. Kirsten Ullbæk Selvig	Chairperson, Northwest European Loran-C System



Agenda Details

3. Presentation of reports by each country on the Loran-C/Chayka programme.

Each Country will make a presentation about the availability of each station and the present/future status of operation.



Agenda Details

4. Operational matters for FERNS co-operating chains

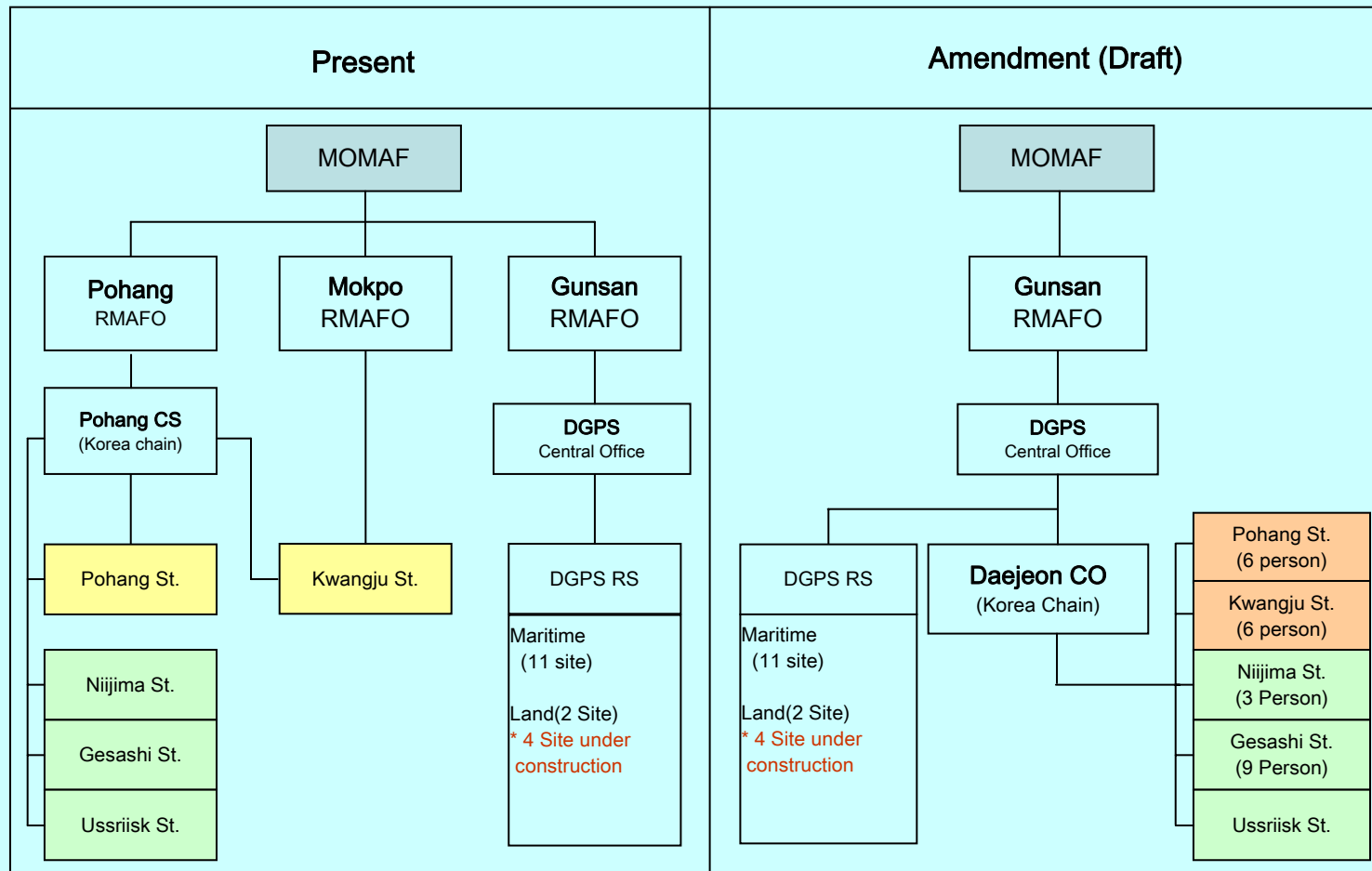
4.1 Scheduled Off-air for 2006

Each country will make a presentation about the scheduled off-air for 2006.

4.2 Other Operational Matters

- . Japan & Korea will suggest the revision of FERNS Operating Guidelines because of reorganization
- . Korea wants to transfer Control Center of Korea Chain(Pohang to Daejeon)

Agenda Details





Agenda Details

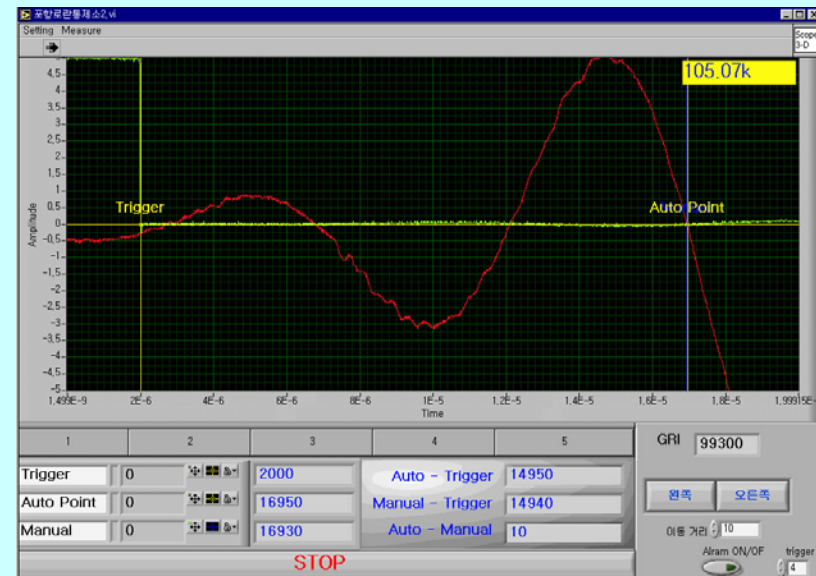
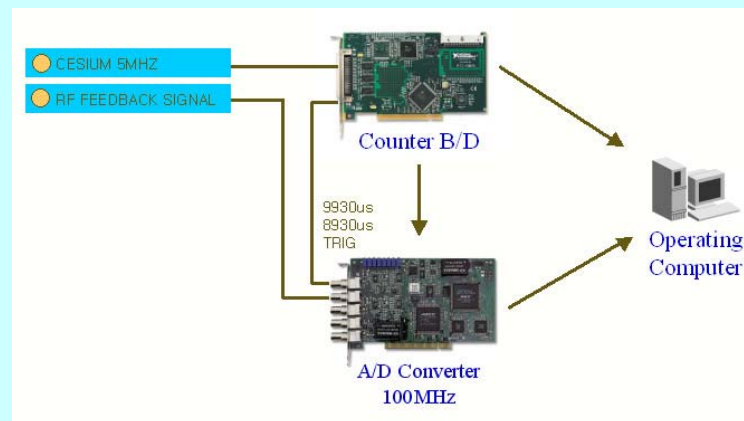
5. Technical matters for FERNS co-operating chains

5.1 FERNS Co-operating Chains Improvement Plan

- . Korea improved Loran-c Timing Monitoring System**

5.2 Other Operational Matters

Agenda Details





Agenda Details

6. Co-ordination of other radionavigation services in the Far East

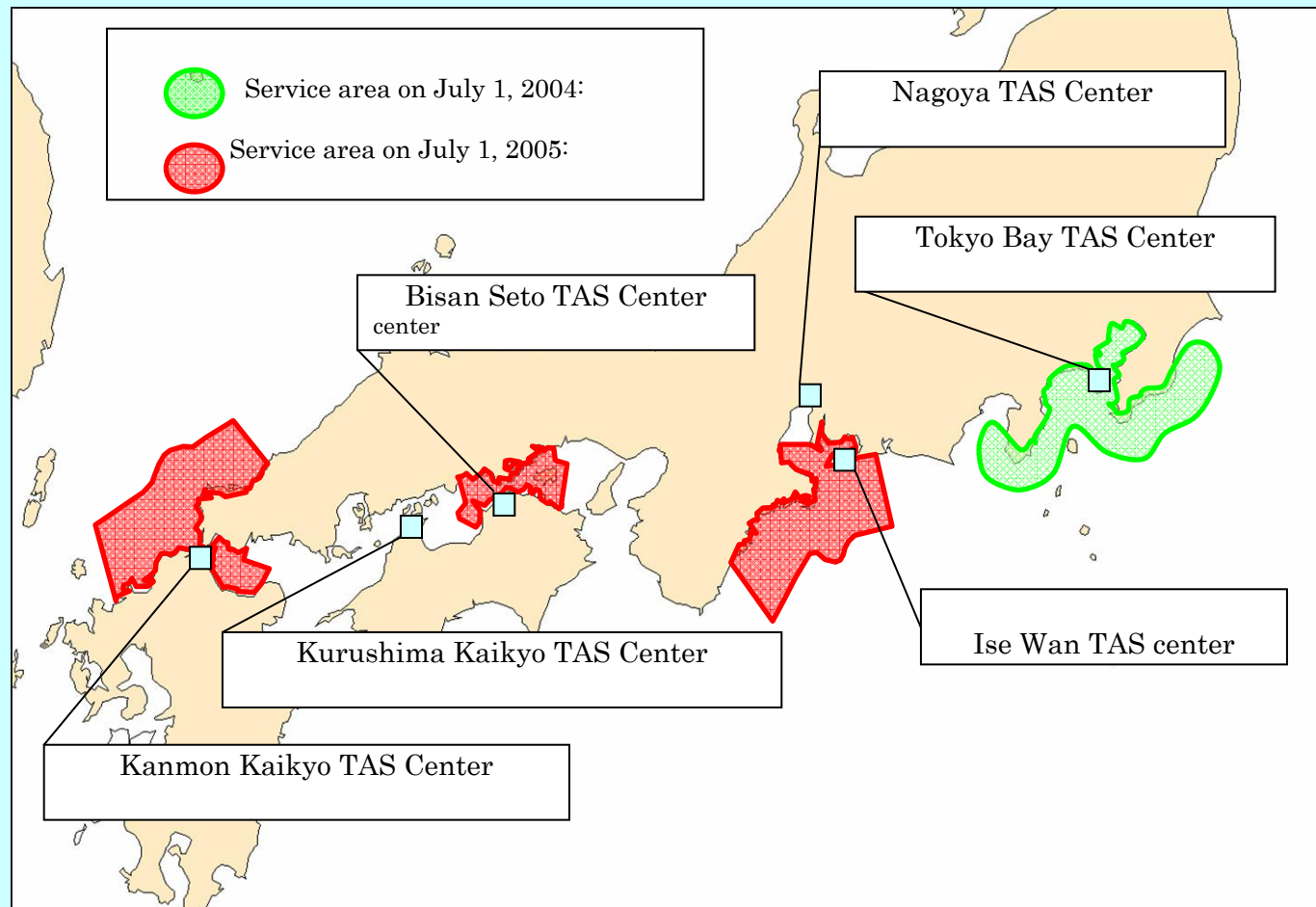
6.1 Japan has provided information services through AIS at each Traffic Advisory Service (TAS) Center

- . Tokyo Bay in 2004**
- . Ise wan, Bisan Seto and Kanmon TAS in 2005**

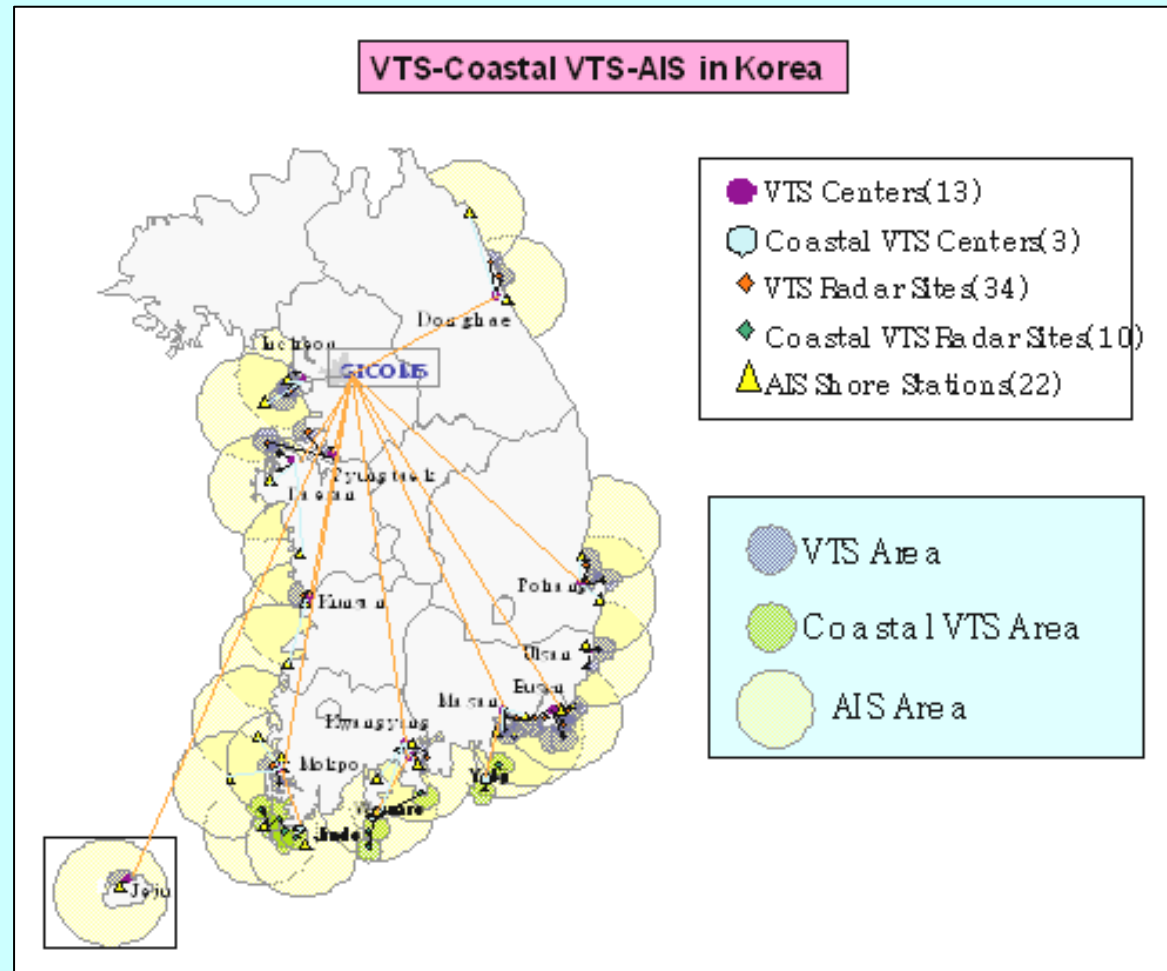
6.2 Status of AIS in Korea

- . 22 AIS shore stations of the country(2001-2005)
(11 VTS centers)**
- . Nationwide AIS network system (GICOMS : General Information Center on Maritime Safety and Security)**

Agenda Details



Agenda Details





Agenda Details

6.3 FERNS Co-operating Chain Improvement Plan

- . Establishment of WG with respect to FERNS Co-operating Chain Improvement Plan (at 12th Session, proposed by Japan)**
- . Need the new contact points of each country**
- . Need the new chairman**



Agenda Details

6.3 for DGPS stations

- 1) **Korea will report the availability rate achieved for DGPS by the NDGPS stations.
(11 DGPS Reference stations (marine use), 6 NDGPS(completed 2, scheduled 4))**
- 2) **Coordination of the frequency revise for DGNSS stations**
Korea will submit DGNSS status of FERNs Members



Agenda Details

8 Date and venue of the 15th session

The 15th session of the Council will be convened in China, in 2006.

***WHAT'S THE FURTRUE OF LORAN IN FAR
EAST?***