



KYSTVERKET

PNT Advisory Board Dec 2013

Arve Dimmen

Director Maritime Safety
Norwegian Coastal Administration

GNSS

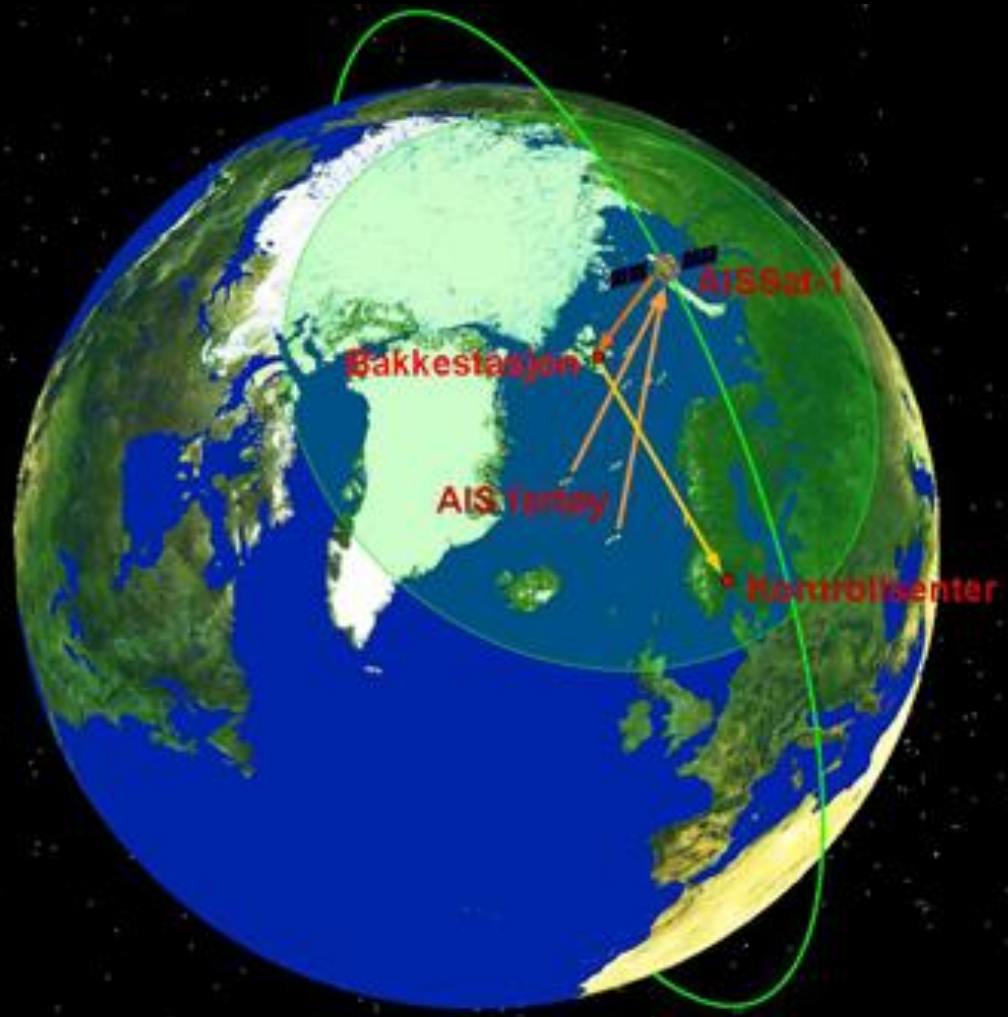
- Norway recognizes the importance of the protection of the GNSS frequency bands
- Study ongoing to exploit current infrastructure for interference detection purposes
- Norway participates in Galileo operational phase
 - Provided access to PRS

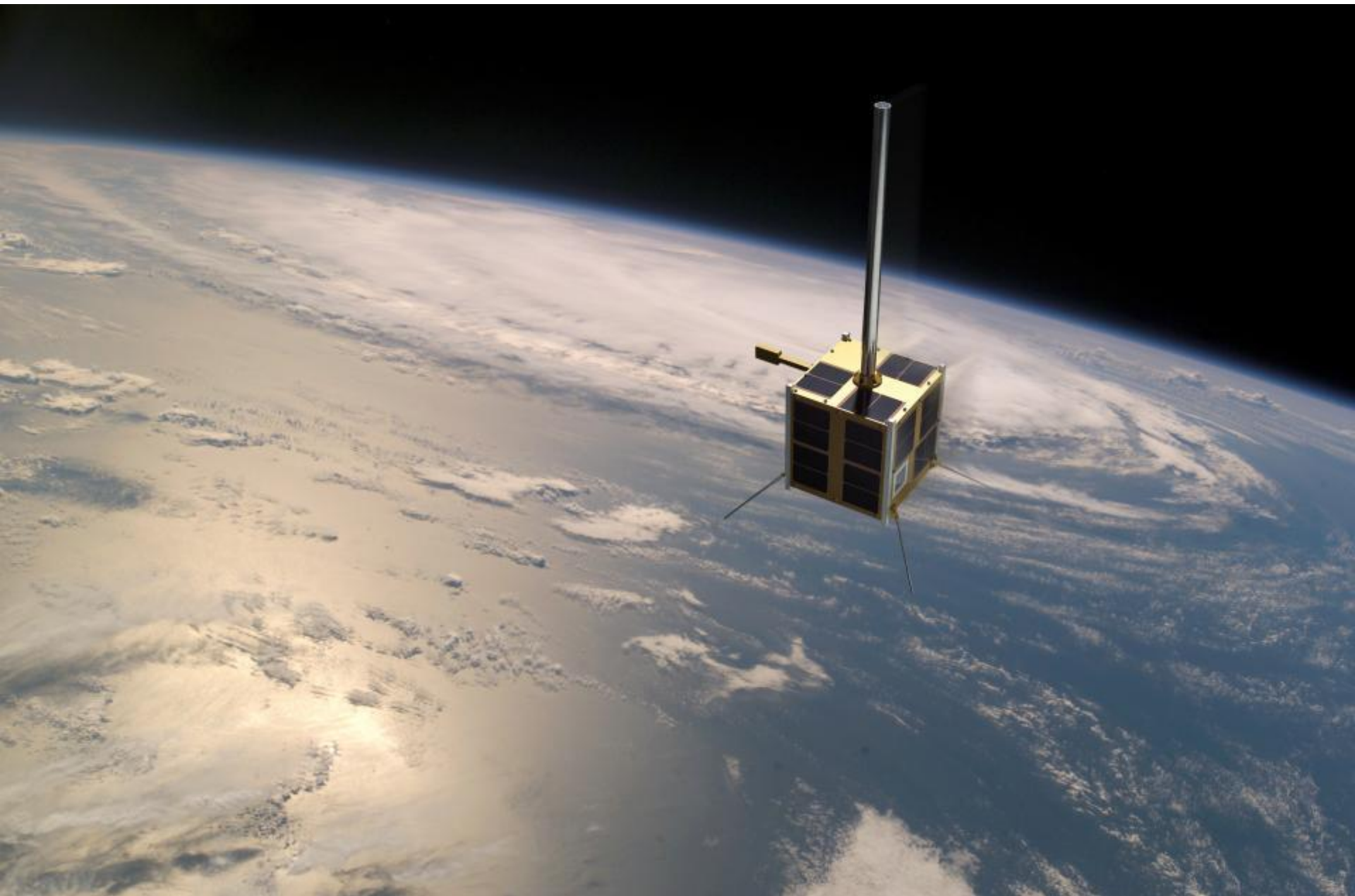


Maritime dGPS

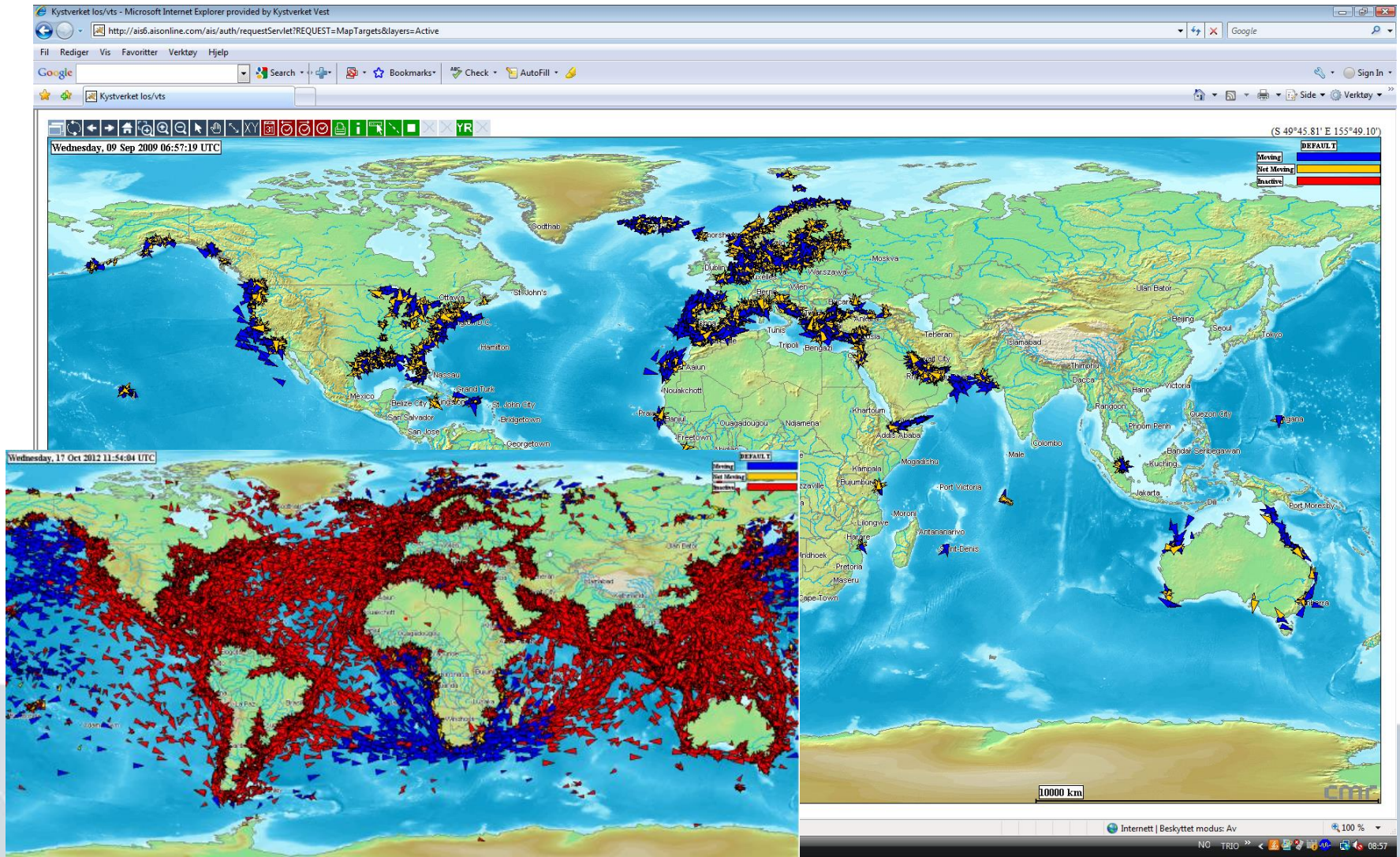
- Maritime dGPS (“IALA-dGPS”)
 - A global standard
 - Operational in 30+ nations worldwide
 - Modernization projects ongoing in several countries
 - IALA-dGPS will probably evolve into a “dGNSS” system
 - Quickest way to achieve Multi-GNSS coverage with integrity...?
 - Will continue to have a role in the maritime PNT system of systems
 - Maybe alongside future versions of EGNOS / WAAS etc?



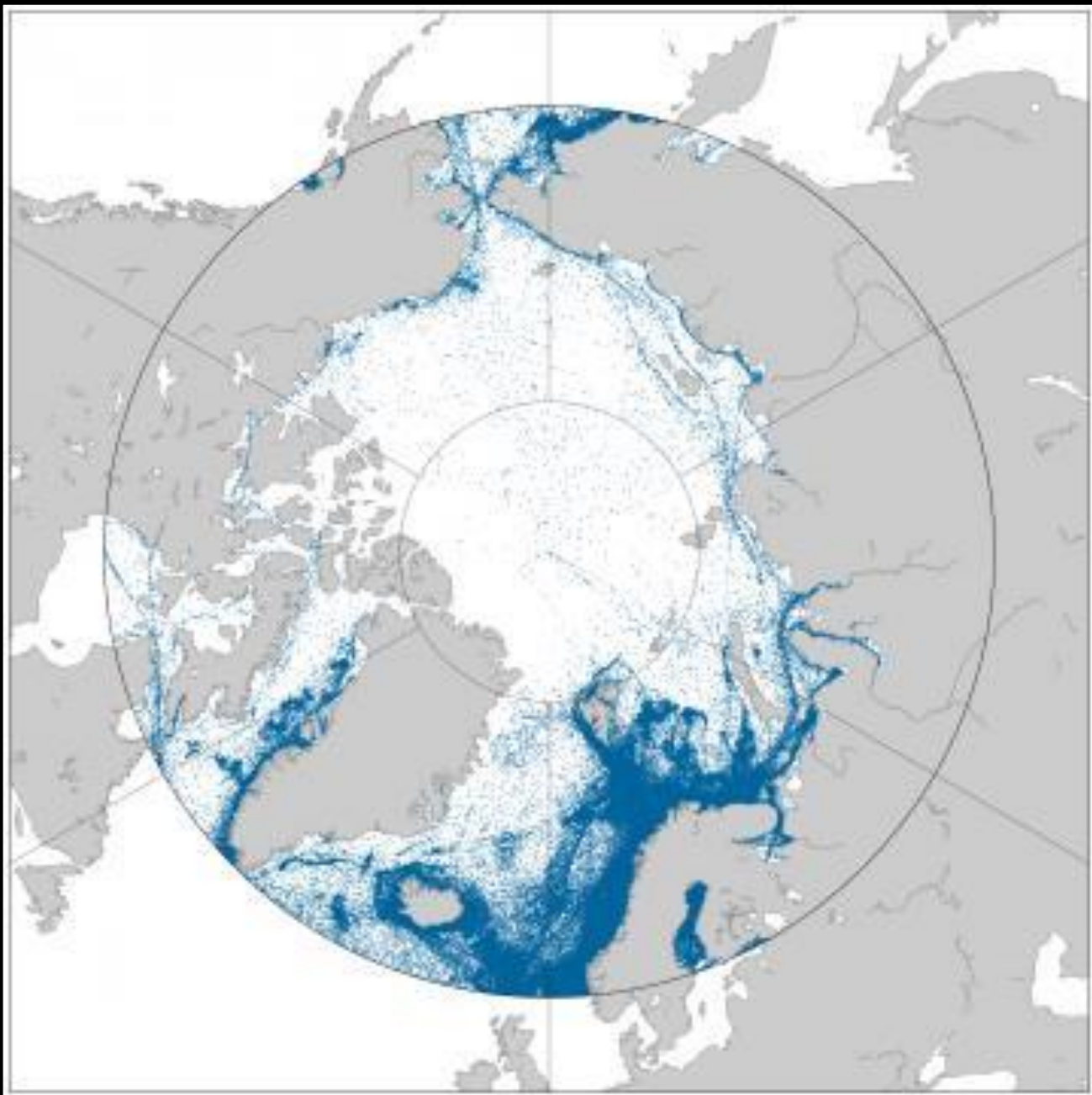




Coastal vs Space based AIS Network







Northern Sea Route



Graphic: Hugo Ahlenius, UNEP/GRID-Arendal



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<http://maps.grida.no/go/graphic/northern-sea-route-and-the-northwest-passage-compared-with-currently-used-shipping-routes>

www.kystverket.no

Transits Northern Sea Route:

2010: 4
2011: 34
2012: 45
2013: 71

SOURCE: BarentsObserver.com

Attribute name	Value
MMSI	636012814
Country	Liberia
Active	true
Ship name	VLAODIMIR TIKHONOV
Call sign	A81A6
IMO number	9311622
Ship type	Tanker
Cargo	Hazard or pollutant category A
Destination	MAP TA PHUT THAILAND
To Country	THAILAND
To Port	MAP TA PHUT
ETA	2011-09-18T20:00:00.000Z
Length	281.0 m
Breadth	50.0 m
Maximum actual draught	13.5 m
Positioning device	GPS
Transponder	ClassA
From Country	RUSSIA
From Port	MURMANSK
Latitude	N 75°47.42'
Longitude	E 055°18.08'
Time stamp	2011-08-22T13:35:30.000Z
Sun Altitude	14.2 °
SOG	14.2 kn



Norvald © Kjerstad



Kystverket tar ansvar for sjøveien

Kystverket er til stede langs hele Norges kyst og yter et mangfold av tjenester for alle typer brukere av norske farvann.



Ved å kombinere GPS-styring og saltløsning, kan saltmengden på norske vinterveier opp mot halveres, ifølge Statens vegvesen. Foto: Roald, Berit

STATENS VEGVESEN

Vegvesenet håper GPS-styrt

PNT Backup



- Norwegian coastline: 22.000 Aids to Navigation (ATON) inst.



"Portable Pilot Unit"

