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FINNISH METEOROLOGICAL INSTITUTE

Finnish Ice Service

Organizational Changes and Production Routines

Tuomas Niskanen
Oceanographic Services
Finnish Meteorological Institute

3rd Ice Analysts Workshop
Copenhagen, Denmark
14-18 of June, 2011





Finnish Ice Service – New winds

1st of Jan 2009

- Finnish Ice Service was merged to Finnish Meteorological Institute

1st of Aug 2009

- Ice Service moved to FMI main building

1st of Jan 2011

- FIS was moved from Marine Research Unit to Weather and Safety Centre Unit
- Oceanographic Services Group was founded and FIS became part of new Oceanographic Services Group





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Oceanographic Services Group

Ice Service is part of new group

- Other services and duties:
 - Wave
 - Sea level
 - Surface temperature
- Oncoming services
 - Drifting
 - Icing on ships
 - Oil spills

Gives out information and warnings for maritime traffic, media, citizens etc.





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Finnish Ice Service – The New Staff

Oceanographers / experts

Antti Kangas (Head of Group)

Patrick Eriksson

Marika Marnela

Tuomas Niskanen

Jouni Vainio





Finnish Ice Service – Core duties

- **Operational work starts in mid-October with SST charts**
 - Twice a week (Mon & Thu) until ice starts to form
- **Daily detailed ice chart from early December until end of May**
 - SST chart still twice a week (Mon & Thu)
- **Simplified Ice Chart**
 - once a week (Mon)
- **Ice Forecasts**
 - For different sea areas once a week (Wed)
 - For winter ports once a week (Wed)
- **Ice Models**
 - Thermodynamic model
 - Ice movement (drifting, concentration, pressure, deformation etc.)
- **One expert in duty, one assisting**



Finnish Ice Service – Timetable

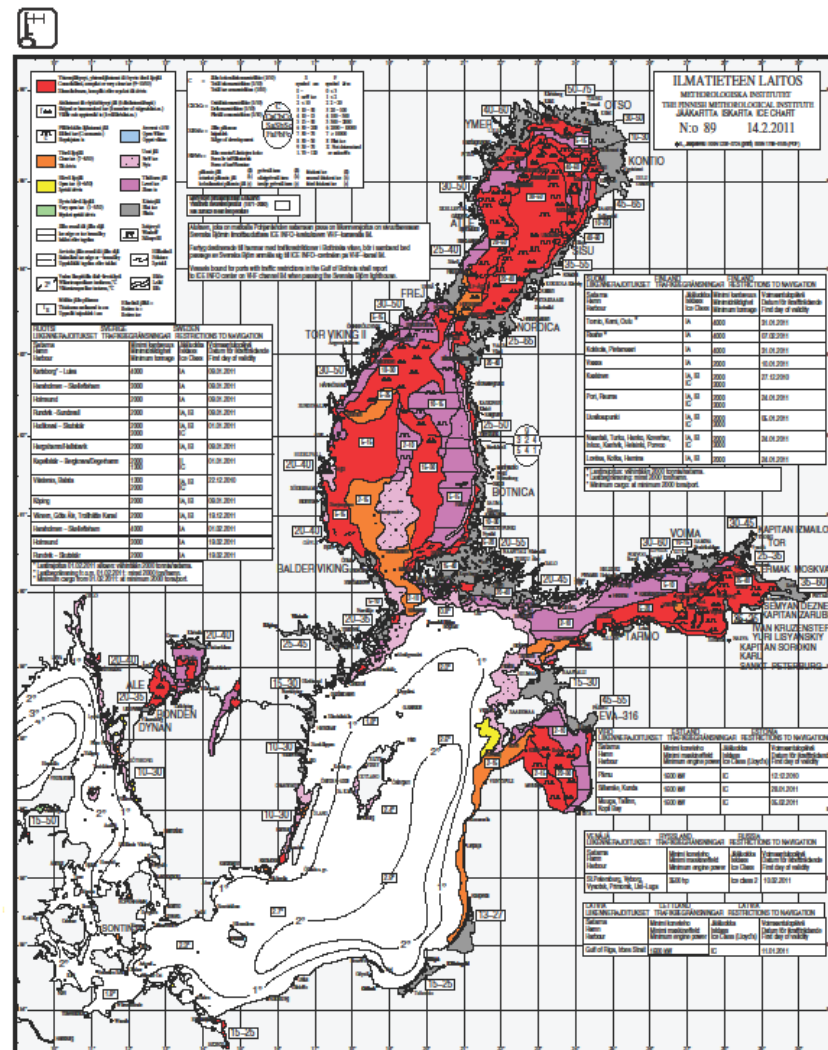
- **Working hours**
 - 8:00 to 16:00 (weekdays)
 - 9:00 to 13:00 (weekends)
- **Ice report**
 - ready for broadcasting by 12:00
- **Ice code**
 - ready for WMO by 14:30
- **Ice chart (color coded and official “black-white”)**
 - ready by 15:00
 - File types:
 - Pdf, eps, grid, png



Finnish Ice Service

Observations from

- Icebreakers
- RV Aranda
- Merchant vessels
- Coastal observers
- Satellites
 - RS-2 (MyOcean)
 - EnviSat (MyOcean)
 - Modis (Sodankylä, FMI)
 - NOAA (Helsinki, FMI)
- Coastal VTS Radars
 - Marjaniemi, off Oulu
 - Tankar Lighthouse, off Kokkola



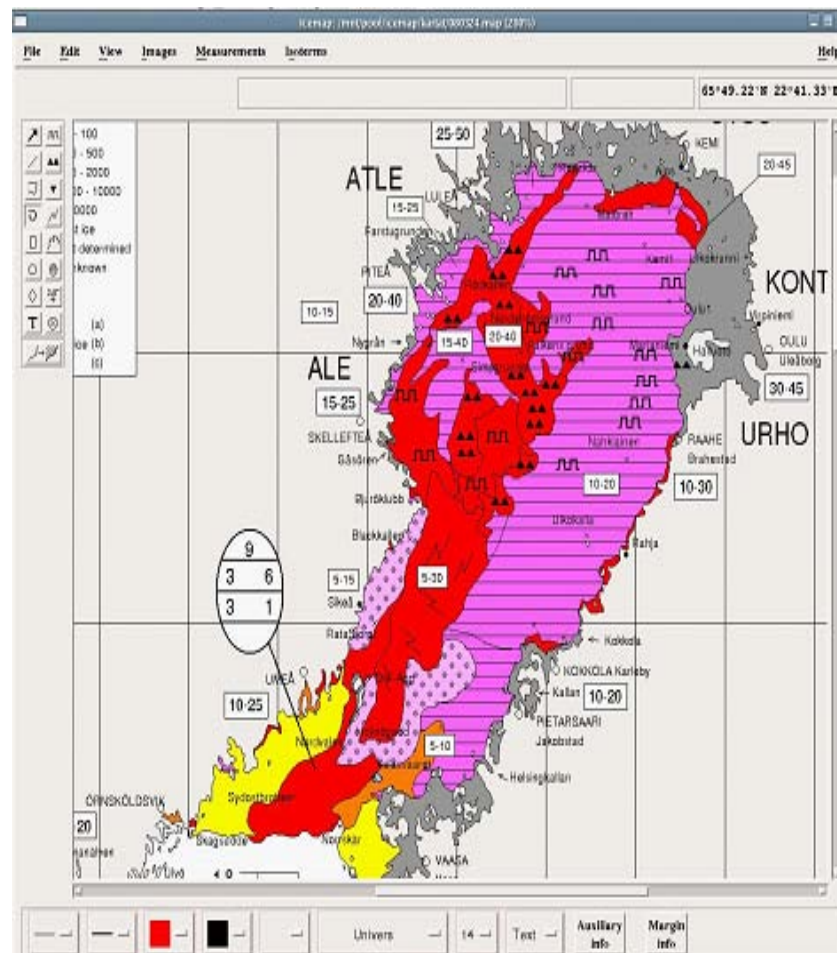


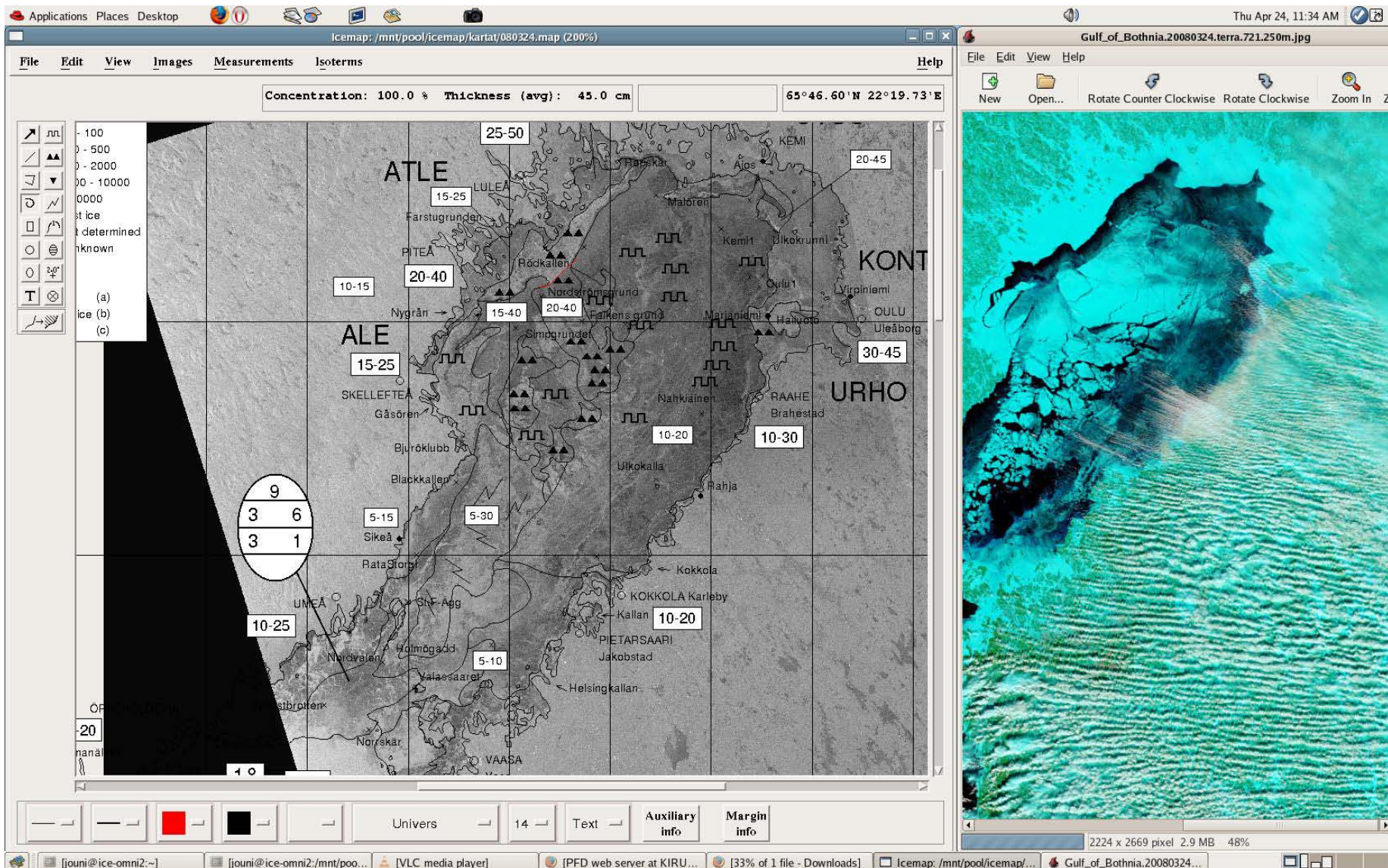
Finnish Ice Service – Ice Charting Tool

ICEMAP in use

- Software developed by VTT
- Ice charts are drawn by using international symbols
- Ice charts in Mercator projection
- 8-bit greyscale satellite images can be called up for analysis

New ArcGIS 10 based software coming up in the near future







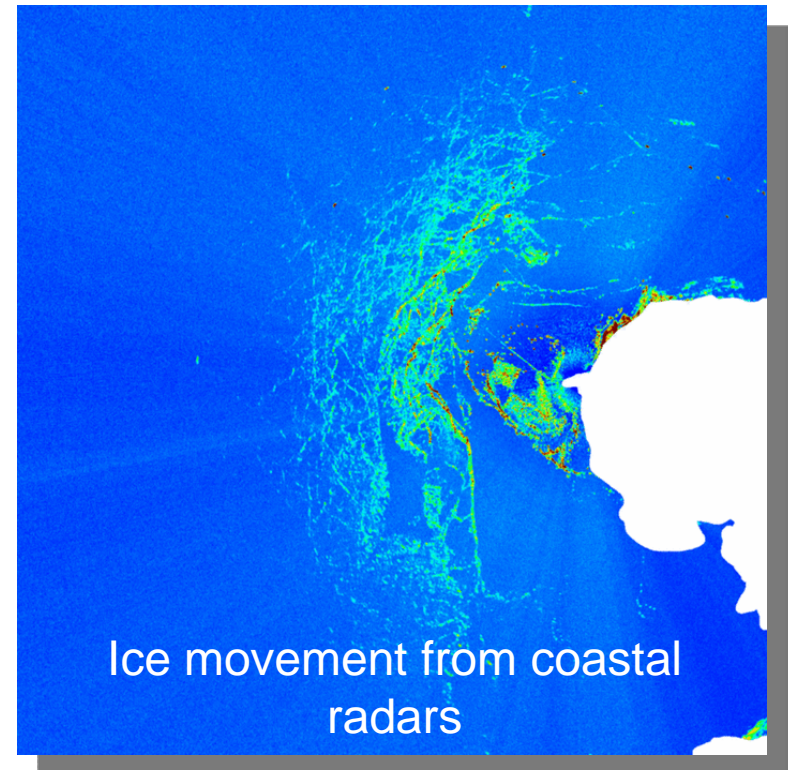
Oceanographic Services – The Future

Oceanographic Service

- Warnings coming up
 - Water level
 - Rough sea (H_s)
- Development of tools and methods

Ice Service

- New ice charting tool
- Development of coastal radars
- Moving to more efficient server environment
- Automatize processes
 - Save expert working time





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Finnish Ice Service – Contact Information

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Other experts

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Ice Service's general emails:

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- www.fmi.fi

- www.baltice.org

- www.bsis-ice.de