

**Our experiences with
scientific cruise planning
software – a journey from in-
house, one-man written
software to MFP user**

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Finnish Environment Institute SYKE
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Eurofleets+ Research infrastructure
management workshop**

Tallinn 29th Nov – 1st Dec 2022



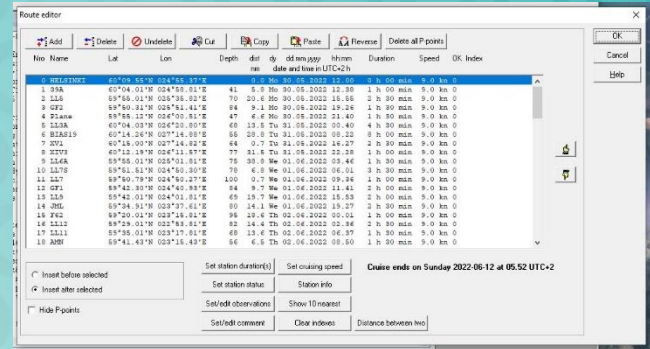
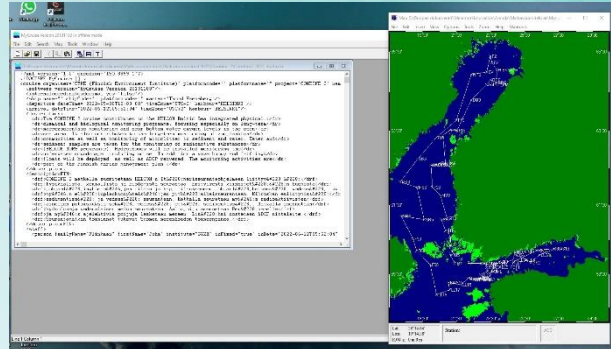
Background

- With the advent of accessible frame computers and PC, chief scientists at FIMR realized that a cruise planning software would be enormously useful.
- Hence, the idea came straight from the users, covering their own needs.
- Advantages of a cruise planning software vs. manual planning:
 - a) Computers quickly and untiringly calculate space/time equations – and don't mind repeating the same
 - b) Save time on designing each cruise by avoiding repetition work
 - c) Make the cruise plans uniform and easier to understand, distribute and archive
 - d) Facilitate usage of previous cruise plans as base for new ones



The Founding Father: Pekka Alenius, a physical Oceanographer at FIMR

- He wrote the first versions of MyCruise cruise planning software by using FORTRAN on the institute frame computer
- Later as PCs became available, programming continues with turbo Pascal, in Windows environment with Delphi
- That software has been in use since 1985, first in FIMR, then in SYKE 2009 onwards
- Development rested on Pekka's shoulders, ICT departments supported the use for scientists
- Colleague chief scientists commented on versions, found bugs and helped in development

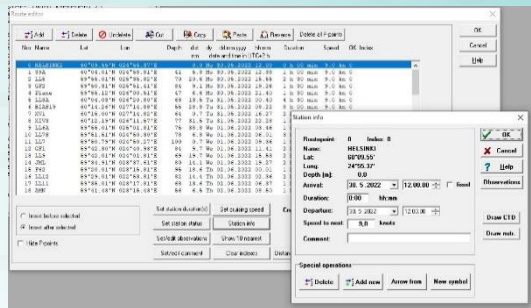


MyCruise software never became commercial. However, it was developed for use in the Baltic Sea:

- Broken/archipelago coastlines
- Shallow waters
- Many countries/borders requiring specific permits
- Cruise admin well presented in SW – visiting scientists/ institutions, cabin order, dates on/off board
- Ability to produce admin documents and reports
- Map features good for the period standards
- Cruise planning tools good: inserting waypoints, stations, change of station order easy and quick
- Also possibility of editing route on map!
- MyCruise cruise plans functioned as basis for on-board cruise info channels, working together with data collecting (commercial) SW like ARALAB, later LIMS
- The software was stand-alone, no internet required!

Many years of successful usage

- Cruise plans drafted by Chief Scientists always first sent to R/V Master for navigational/route selection evaluation, often resulting in an altered cruise plan saving time & fuel
- After abolition of FIMR 2008, Pekka Alenius transferred to FMI, while Aranda went with SYKE
- Co-operation continued, eventually SYKE ICT personnel "adopted" MyCruise support
- Foreseeable problems were evident already years back: Pekka is retiring now, nobody else knew how to carry the SW further
- No development for the SW available after Pekka



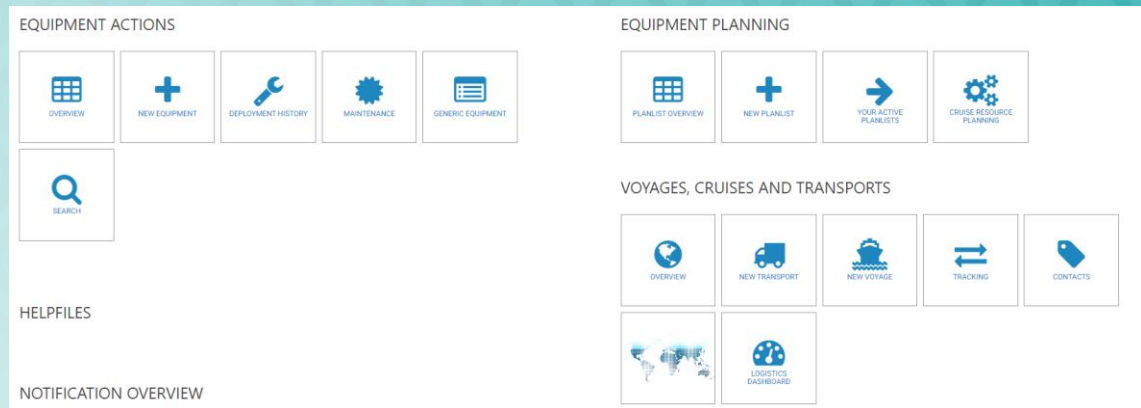
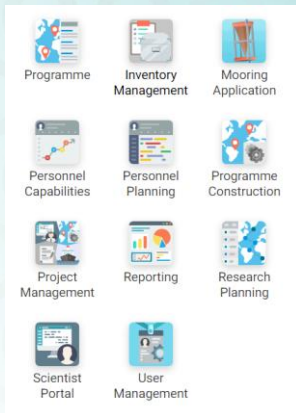
CABIN ORDER R/V ARANDA Cruise: COMBINE 2021, 30.05. - 12.06.2022		
HELICOPTER DECK		
	PERSONS	LAB PHONE
CABIN 000 - Chief Scientist		
PHONE 200 -	Pekka Alenius	
CABIN 001 -		
PHONE 201 -	Y. P. P. P.	
CABIN 011 -		
PHONE 211 -	Y. P. P. P.	
CABIN 021 -		
PHONE 221 -	Y. P. P. P.	
CABIN 031 -		
PHONE 231 -	Y. P. P. P.	
LABORATORY DECK		
CABIN 210 -	Y. P. P. P.	
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Solution?

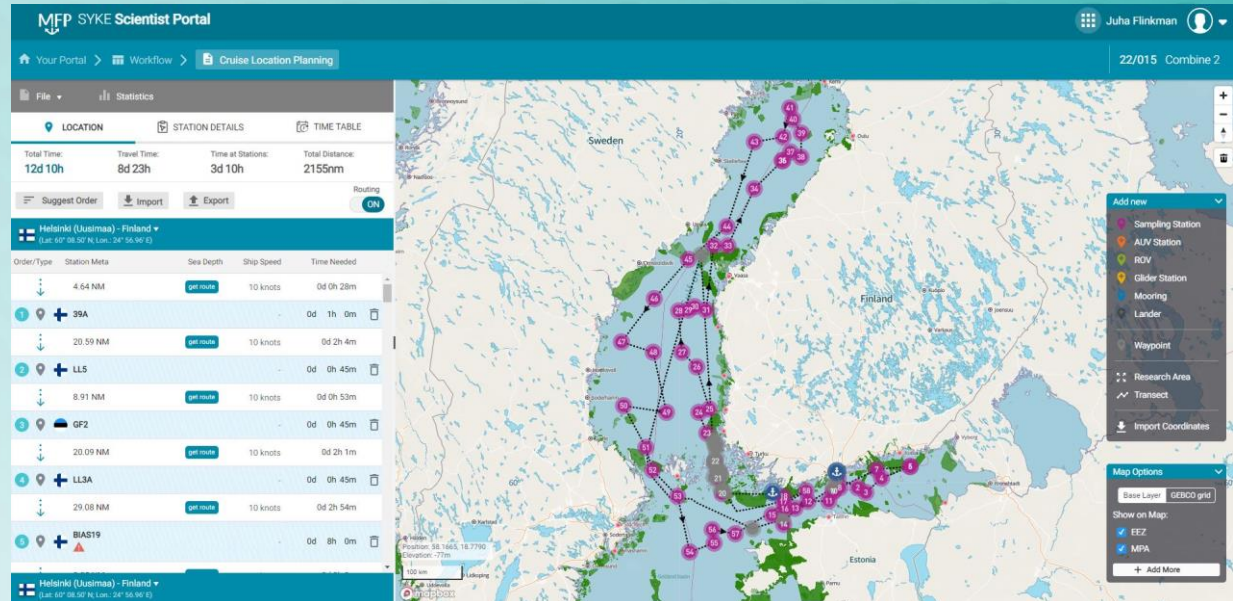
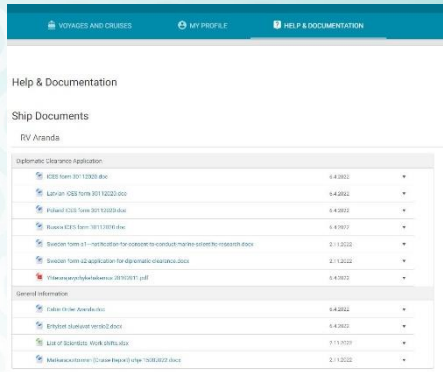
So, we had a need for a new cruise planning SW package!

- Through ERVO & IRSO, we had gained knowledge of MFP
- First steps to join in 2019
- Member since 2020
- MFP much more than MyCruise was, more features/areas, logistics/warehouse handling
- Constant and continuing commercial support

MFP Marine Facilities Planning



- Flexibility of SW package: can be tailored to suit specific user's needs
- Development positive: many features from MyCruise added & made functional
- Additional benefits from using MFP: Many institutes/operators use it, hence new ideas/developments are forthcoming more frequently
- Open exchange of ideas in the "spirit" of ERVO, IRSO, EF+



Looking forward, the next steps

- Hopefully next season all remaining glitches have been ironed out – Panu, Beiko and Rienk have been hard at work.
- Full transition from MyCruise to MFP in SYKE R/V ops in 2023.
- Besides cruise planning, utilization of the features that MyCruise doesn't have: warehouse, logistics, different user roles in MFP, vast possibilities in reporting, etc.

