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

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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 thus aided 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
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 that MyCruise was, more features/areas, logistics/warehouse handling
- Constant and continuing commercial support
- 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.

Thank You!