



Remote Maintenance

Management of shipboard IT infrastructure from shore

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Agenda



- »» Why Remote Maintenance ?
- »» How Remote Maintenance works
- »» How expensive is Remote Maintenance ?
- »» Customer cases
- »» Conclusion



Why Remote Maintenance

- » more expertise needed to operate a fleet
 - » cost pressure to optimize operation processes
 - » processes more complex
 - » more land&ship-based specialized IT-systems

- » less onboard expertise possible
 - » captain cannot be also an IT-expert
 - » onboard IT-experts are expensive
 - » different special IT-system requiring different expertise

Why Remote Maintenance



» Upcoming solution:

Outsourcing of onboard activities & expertise
towards land-based specialists

➔ **Remote Maintenance / Remote control**

How RM works



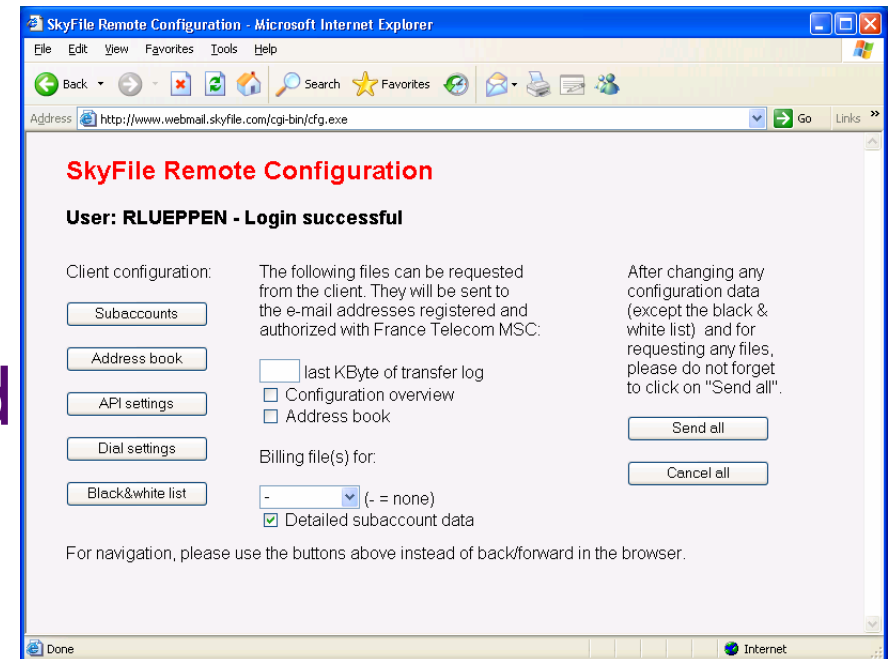
- » Database synchronisation
 - ▶ with ship-management systems some elements are outsourced to the land-office
 - ➔ SpecTec Maintenance & Purchase
 - ➔ crew-planning
 - ➔ incremental ECDIS chart-updates
 - ▶ the databases need to be synchronised with a land-based server
 - ▶ France Telecom MSC provides with the API of SkyFile Mail an improved cost-effective synchronisation mechanism which is compatible with almost each ship-management system



How RM works

- » Remote control (e.g.: SkyFile Mail)
 - ▶ remote actions of the onboard-settings:
 - ➔ adding, changing, deleting onboard-parameters
 - ➔ obtaining onboard-parameters, log-files, billing-files
 - ➔ costs very little (< 5 kBytes)

▶ full control of the onboard email-configuration, no action or expertise required





How RM works

» Remote maintenance

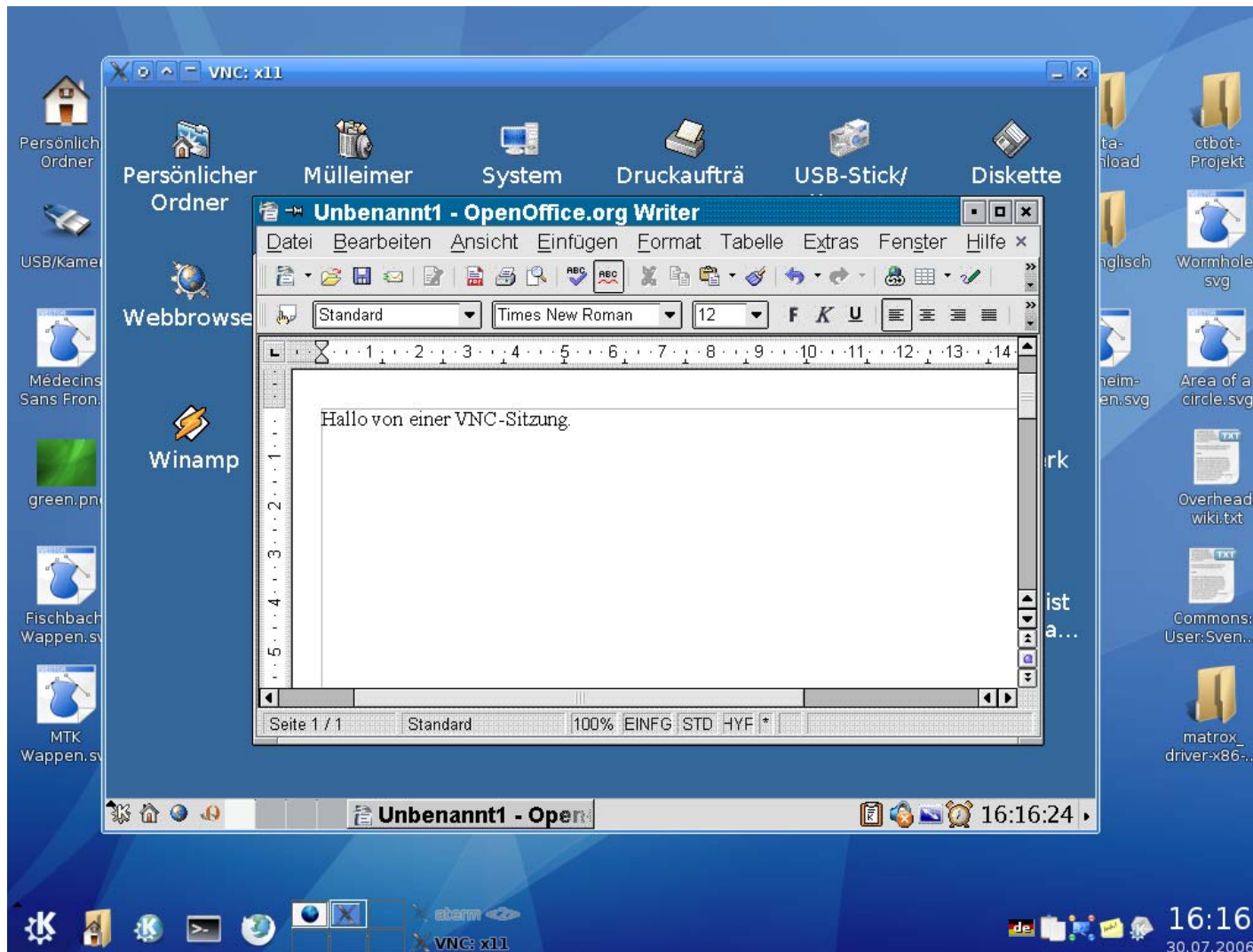
gives full access to the remote PC

→ connecting remote and land-PC into one network
-> might require high bandwidth

→ connection to the remote PC in terminal-mode
-> low bandwidth requirements (>15 kbit/s)

→ affordable with Inmarsat B-HSD, Fleet-55, Fleet-77

How RM works (terminal mode)



Common RM-tools

- ➔ AnyPlaceControl
- ➔ VNC
- ➔ Citrix Metaframe
- ➔ PC Anywhere
- ➔ NetOp Remote Control



How RM works

» Remote maintenance - advantages

the entire onboard IT-system including network, operation system and applications can be maintained or updated from remote

- ➔ without travel costs and wasted time for specialists
- ➔ same number of experts can manage much more vessels, local representatives can be reduced
- ➔ instant help can be given, even if the ship is at sea
- ➔ maintenance can be outsourced directly to the respective expert of the supplier
- ➔ reduced risk that non-skilled “experts” damage the system

How expensive is RM ?



- ➔ ship in Singapore, IT-provider in Hongkong
- ➔ expert-salary: 100,- US\$ per hour

costs	local expert	supplier expert	remote maintenance
pure problem solving	1 hour	0,5 hour	0,5 hour
busy time	5 hours	2 days	0,5 hour
expert: salary	500,- US\$	1600,- US\$	50,- US\$
expert: travel expenses	0,- US\$	2000,- US\$	0,- US\$
SatCom costs (Fleet-77)	0,- US\$	0,- US\$	240,- US\$
total	500,- US\$	3600,- US\$	290,- US\$

RM Customer Case



- » Peter Döhle, 69 vessels, Germany
 - ▶ benefiting from SkyFile Mail “Remote Control”
 - ▶ Mr. Dittmer, IT-manager:

“The SkyFile Mail remote control tool gives us a flexible tool to configure and control the onboard mail-system. Our captains don’t even need to prepare the crew-invoicing anymore. This gives him more time for his original task!”

RM Customer Case



- » Comapêche: Joseph Roty II, France
 - ▶ swimming fish factory
 - ▶ operates at sea up to 6 month without entering a port
 - ▶ remote maintenance of the fish processing system directly by Alfa Laval Nordic, Denmark

An outage of the system would cost considerably more than remote maintenance does!





Conclusions

- » with RM activities and expertise are outsourced towards land-based experts
- » dependent of the complexity of the onboard system RM saves money, already!
- » with Inmarsat Fleet Broadband (coming Q3-2007) RM-applications become quicker and cheaper, a perfect fit!

For more information



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Thank you
for your attention!