



Experience with telemedicine on Odfjell vessels

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- About Odfjell ASA
- What is telemedicine?
- Injuries and illness at sea: who cares?
- Why does Odfjell use it?
- About iMed AS
- The system
- The experiences

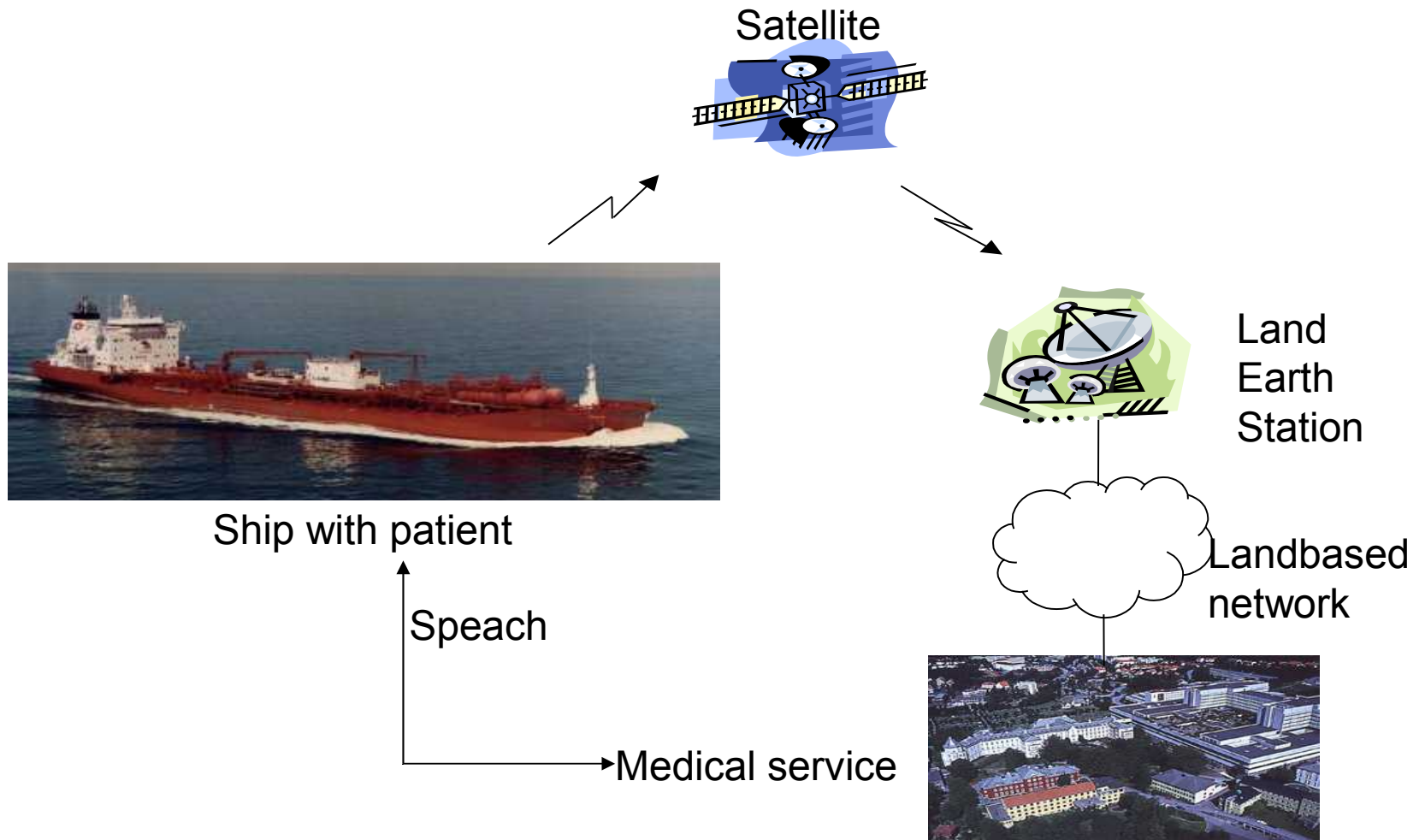
- Founded by the Odfjell family in Bergen
- Chemical shipping company
- Operation of 91 ships, world wide trade
- 27 newbuildings and several tank terminals
- Crew management on 37 ships
- Approximately 400 Norwegian and 1600 Philippino crew
- Head quarters in Bergen, Norway

- Established 2001 as a spin off from Norwegian Centre of Telemedicine
- From 2006, 100% owned by Dialog AS
- Main product is the merMAid system
- Main market is the maritime sector
- Located in Tromsø, Norway

What is telemedicine?

- Telemedicine can be defined as "medicine practised at a distance". It therefore encompasses diagnosis, treatment and medical education. (Journal of telemedicine and telecare)
- There is a vast number of other definitions, but the common factor is that you move the information about the patient to the doctor, rather than moving the patient

Maritime telemedicine



Injuries and illness at sea: who cares?

- A medical officer is in charge of the patient
- On land, several doctors are available to give advise
- The doctor will need the best possible information about the state of the patient

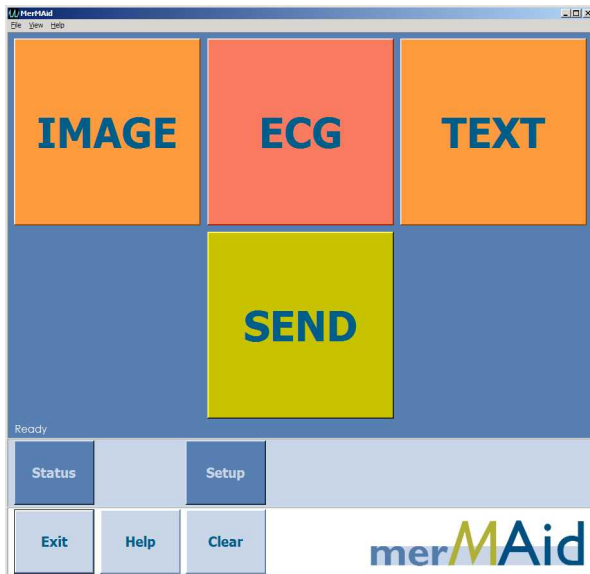
- 14 countries have ratified ILO 164, and are required to provide free medical aid over Radio and telephone to seafarers
- Several Radio Medical services also receive e-mails and images as well as telex and fax

Why does Odfjell use telemedicine?

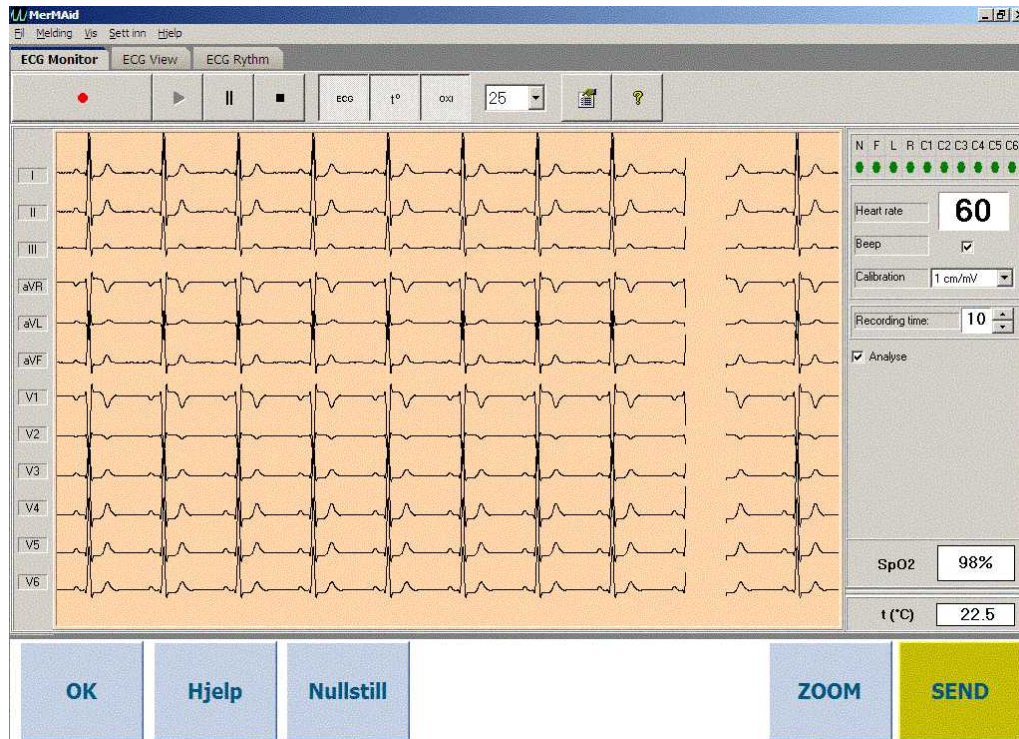
- Odfjell has a strong focus on crew health
- All crew have a medical licence, but we still have cases of illness and accidents on board
- Chest pains is amongst the most common health problems
- We have had cases of crew being disembarked for chest pains that turned out to be harmless
- Thus we decided to acquire an ECG system
- We wanted the best possible diagnosis to ensure correct treatment of crew in acute and non-acute situations

merMAid

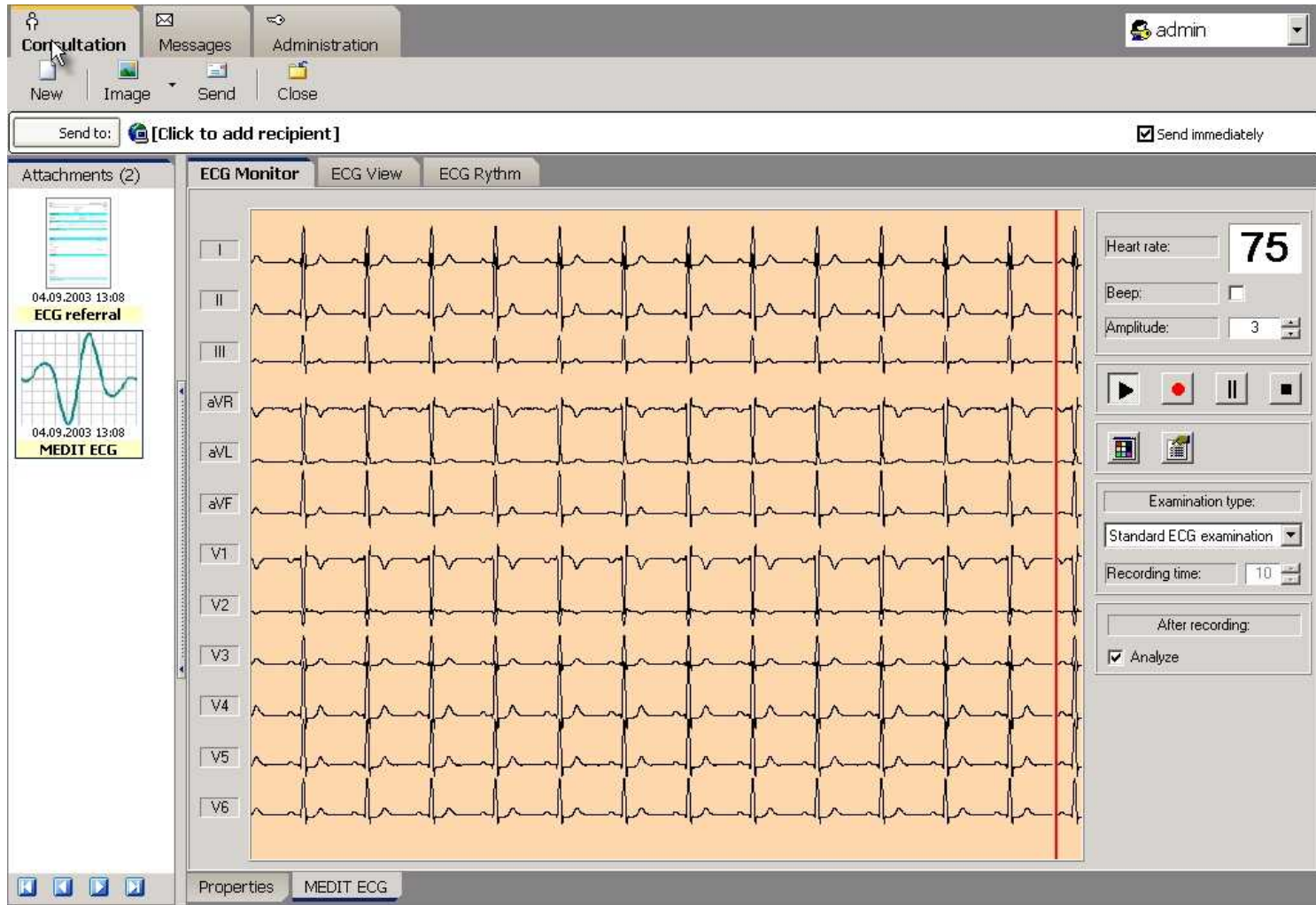
The user interface is developed for quick operation by “non-health personnel”.



Monitor ECG, store and send



Receive, read and analyse



The screenshot displays a software interface for ECG monitoring and analysis. The main window is titled "ECG Monitor" and features a grid of 12 ECG traces labeled I, II, III, aVR, aVL, aVF, V1, V2, V3, V4, V5, and V6. The heart rate is displayed as 75. The interface includes a menu bar with "Consultation", "Messages", and "Administration", and a toolbar with "New", "Image", "Send", and "Close". A "Send to:" field is present, along with a "Send immediately" checkbox. The left sidebar shows "Attachments (2)" with two items: "ECG referral" and "MEDIT ECG". The right sidebar contains controls for "Heart rate", "Beep", "Amplitude", "Examination type" (set to "Standard ECG examination"), "Recording time" (set to 10), and "After recording" (with "Analyze" checked). The bottom status bar shows "Properties" and "MEDIT ECG".

Consultation Messages Administration

New Image Send Close

Send to: [Click to add recipient] Send immediately

Attachments (2)

04.09.2003 13:08
ECG referral

04.09.2003 13:08
MEDIT ECG

ECG Monitor ECG View ECG Rhythm

I II III aVR aVL aVF V1 V2 V3 V4 V5 V6

Heart rate: 75

Beep:

Amplitude: 3

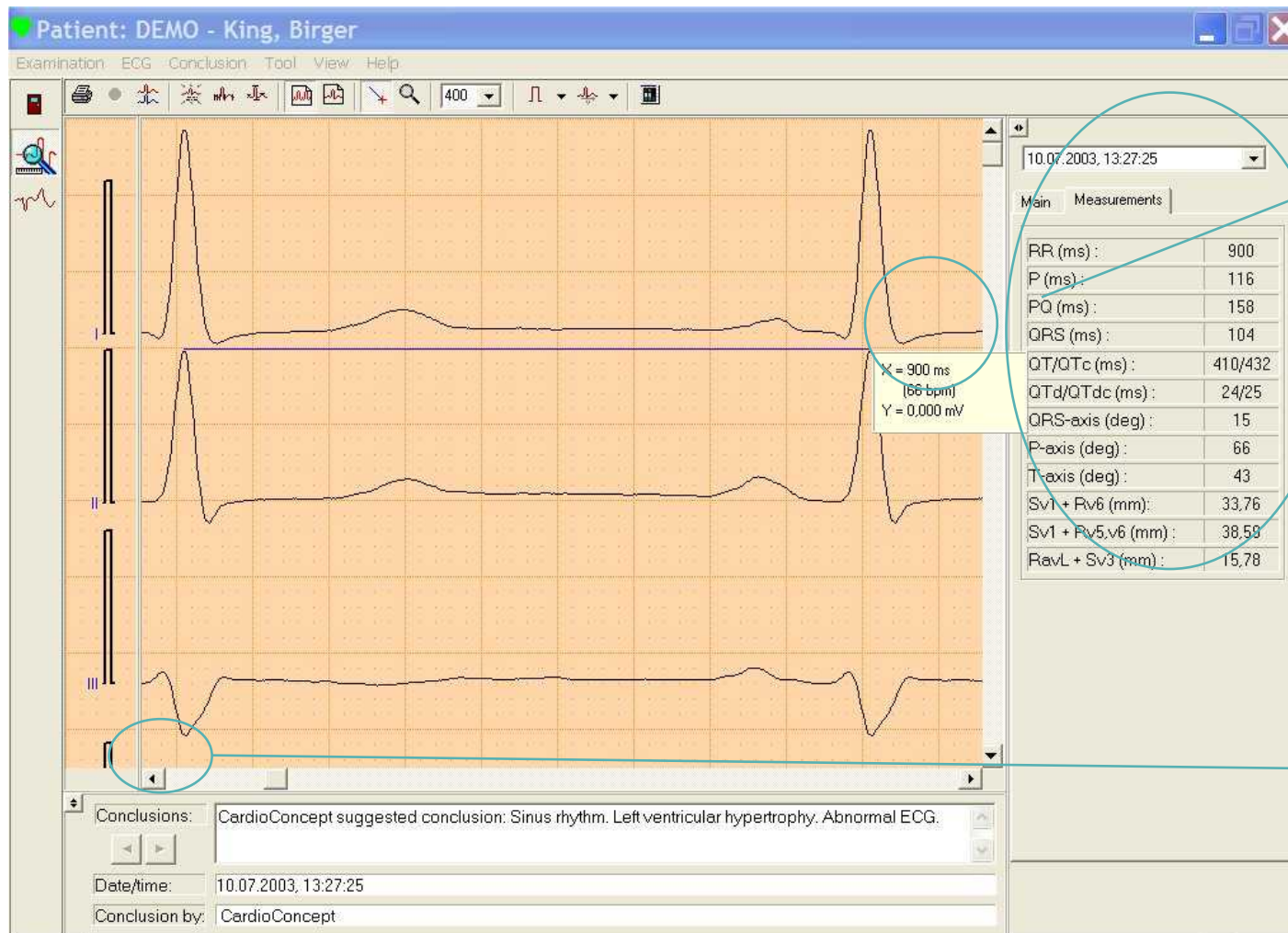
Examination type: Standard ECG examination

Recording time: 10

After recording: Analyze

Properties MEDIT ECG

Form a conclusion and send



Measurement results.

Display of ECG parameters.

Switch between the various conclusions that may exist for this recording.

Take a picture, store and send



This image shows a hand that has been hit by a high pressure water. After examination of images, it was decided that immediate evacuation was not necessary



This image shows an infected ankle. The image helped the doctor give the correct advice for local treatment

Images are shown courtesy of Centro Internazionale Radio Medico and GMS

- Five ships use the ECG system
- All ships have digital cameras
- Overall positive response from the medical responsible:
 - The system is easy to use
 - It shows commitment from management to crew health
 - It increases feeling of security
- Few real cases of use
- Evaluation is ongoing these days

- Telemedicine is not yet widely used on merchant ships, but when the need arises it can be of vital importance
- It helps the doctor reach the right diagnosis, limiting unnecessary evacuations
- It makes the officers and ratings feel safer
- Not enough research on the actual effect to form firm conclusions yet.

- Comments or questions:
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Demonstration available at Dialog stand