

Remote auscultation of heart and lung sound



Johan Skönevik
Leif Nyström
Kenji Claesson

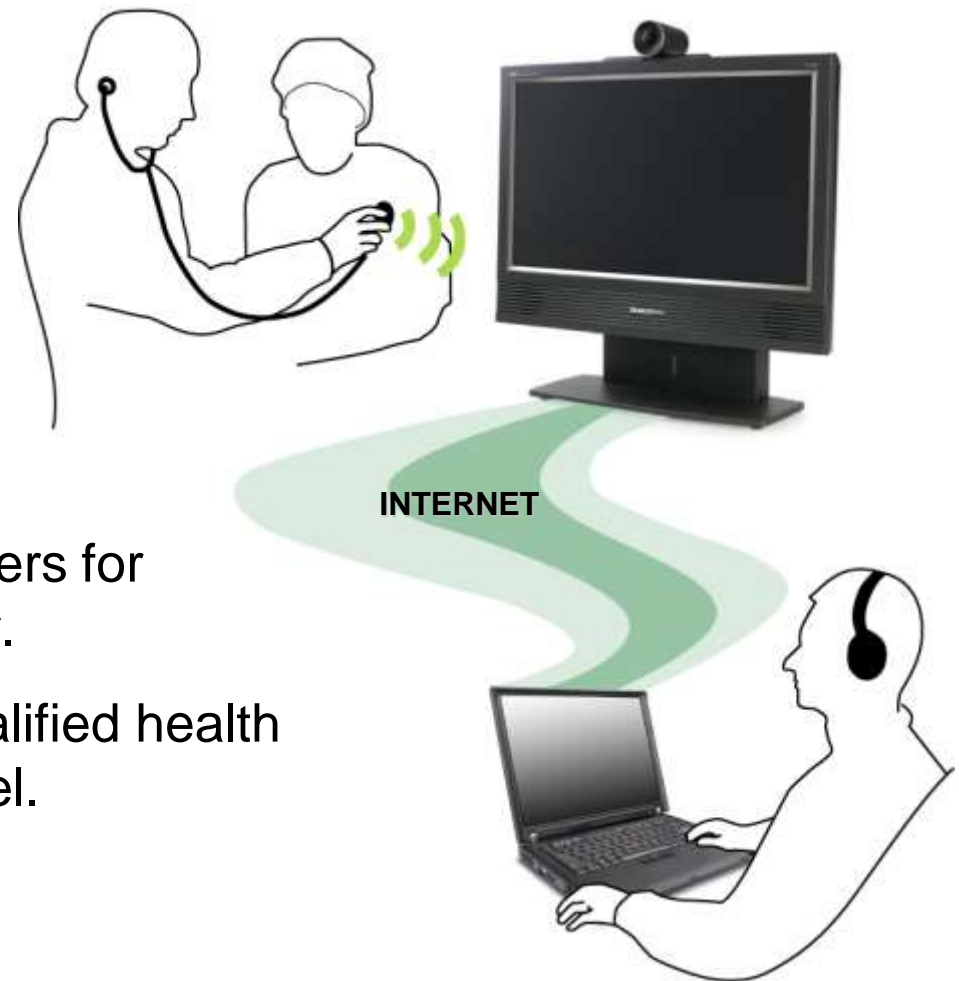
Department of Biomedical Engineering &
Informatics – R&D
County Council of Västerbotten
UMEÅ

Electronic stethoscopes

- Better sound and higher volume
- Auscultations can be stored
- Remote consultations




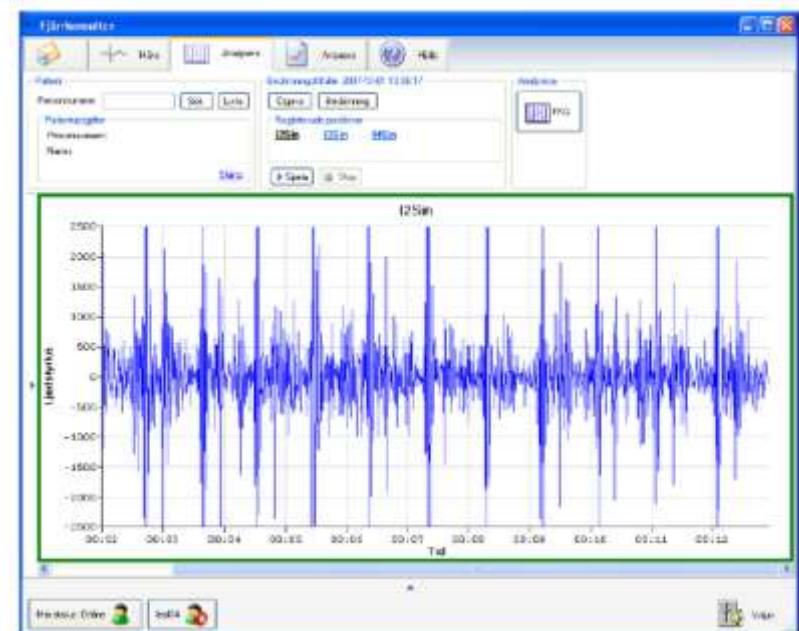
Remote Consultant



- Transfer physiological parameters for assessment in realtime or later.
- Improved accessibility of qualified health care without unnecessary travel.

Two versions

1. Automatic connection, no computer interaction 
2. User interface with functions for consultation and analysis.



Use

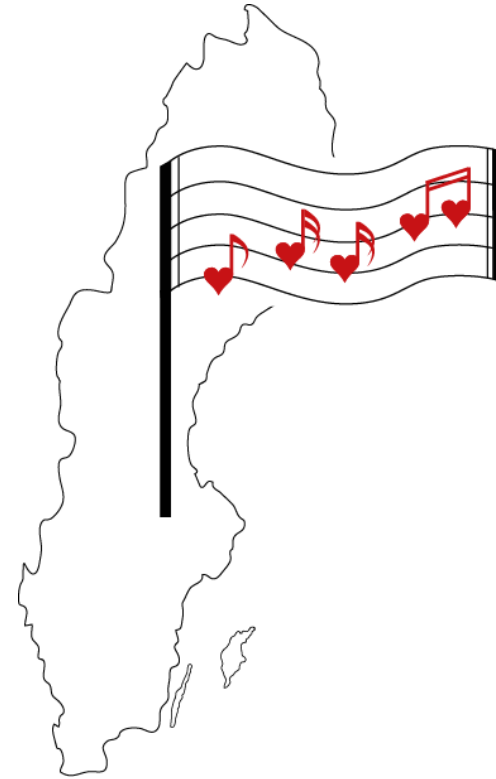
- Health care center without a doctor (doctor at a distance)
- Difficult cases of patients, for example a heartspecialist listening to heart murmurs.
- Primary healthcare visiting patients at their home.
- Nurse registering heart and lung sound for assessment and discussion with doctor in realtime or later.

Demo heart auscultation

Remote auscultation

Patient + nurse

Doctor



Learned lessons

- Create good cooperation among the users
- Evaluating the technology in a meaningful way is difficult
- Create clear incentives, telemedicin points

Thank you!

Questions?