

Tracking Probes within MITK-IGT

Breakout Session NAMIC Winter Projekt Week
January 4th, 2016

Thomas Kirchner

t.kirchner@dkfz.de

Computer-Assisted Interventions
German Cancer Research Center Heidelberg

dkfz.

GERMAN
CANCER RESEARCH CENTER
IN THE HELMHOLTZ ASSOCIATION

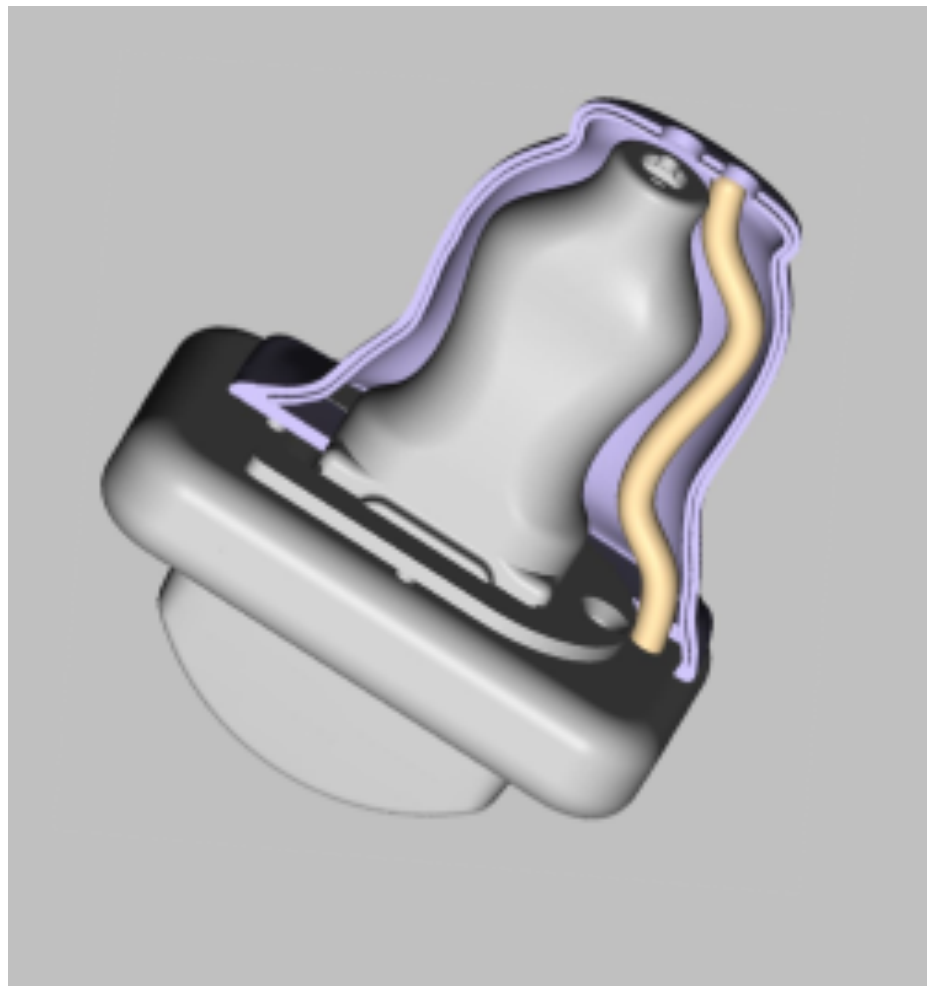
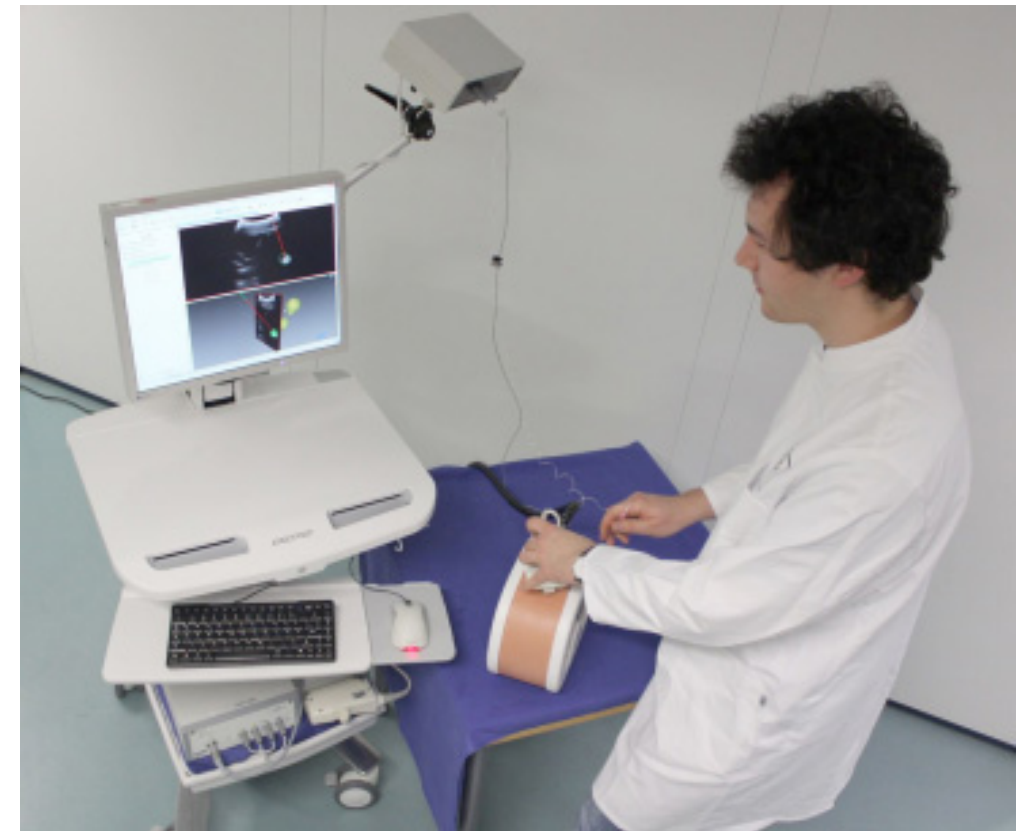


50 Years – Research for
A Life Without Cancer

Current Examples in MITK-IGT: #1 — “Combined Modality”

“EchoTrack”

Calibration with N-wire desirable



Navigation View

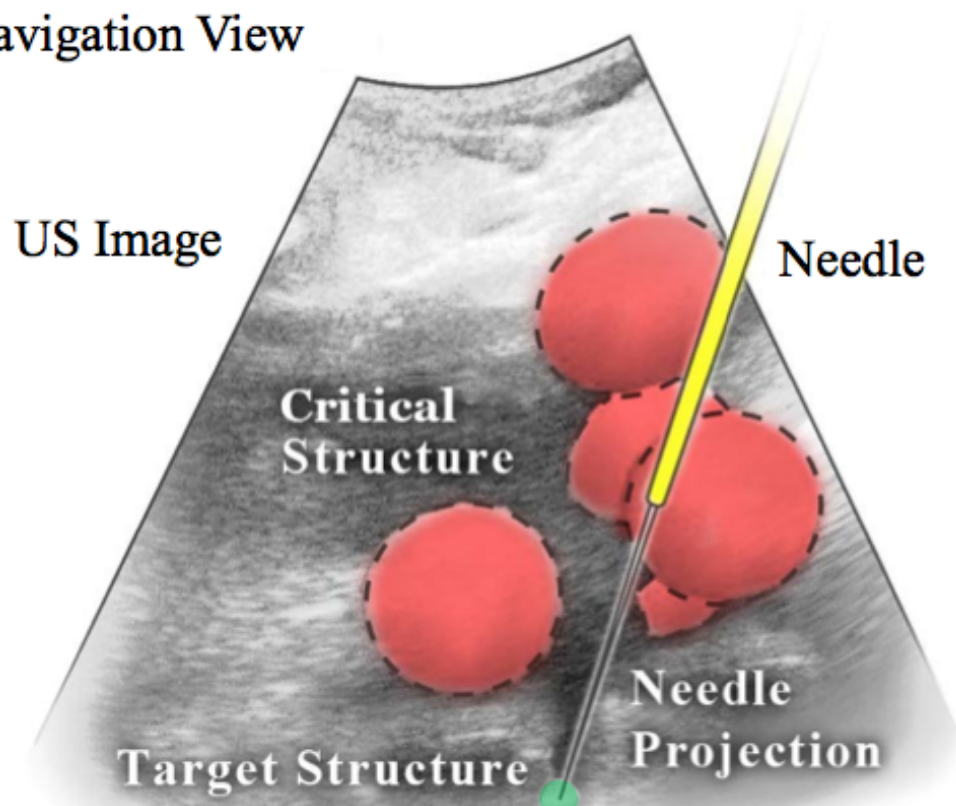
US Image

Needle

Critical
Structure

Target Structure

Needle
Projection



März et al.: "Interventional real-time ultrasound imaging with an integrated electromagnetic field generator", Int J CARS 2014

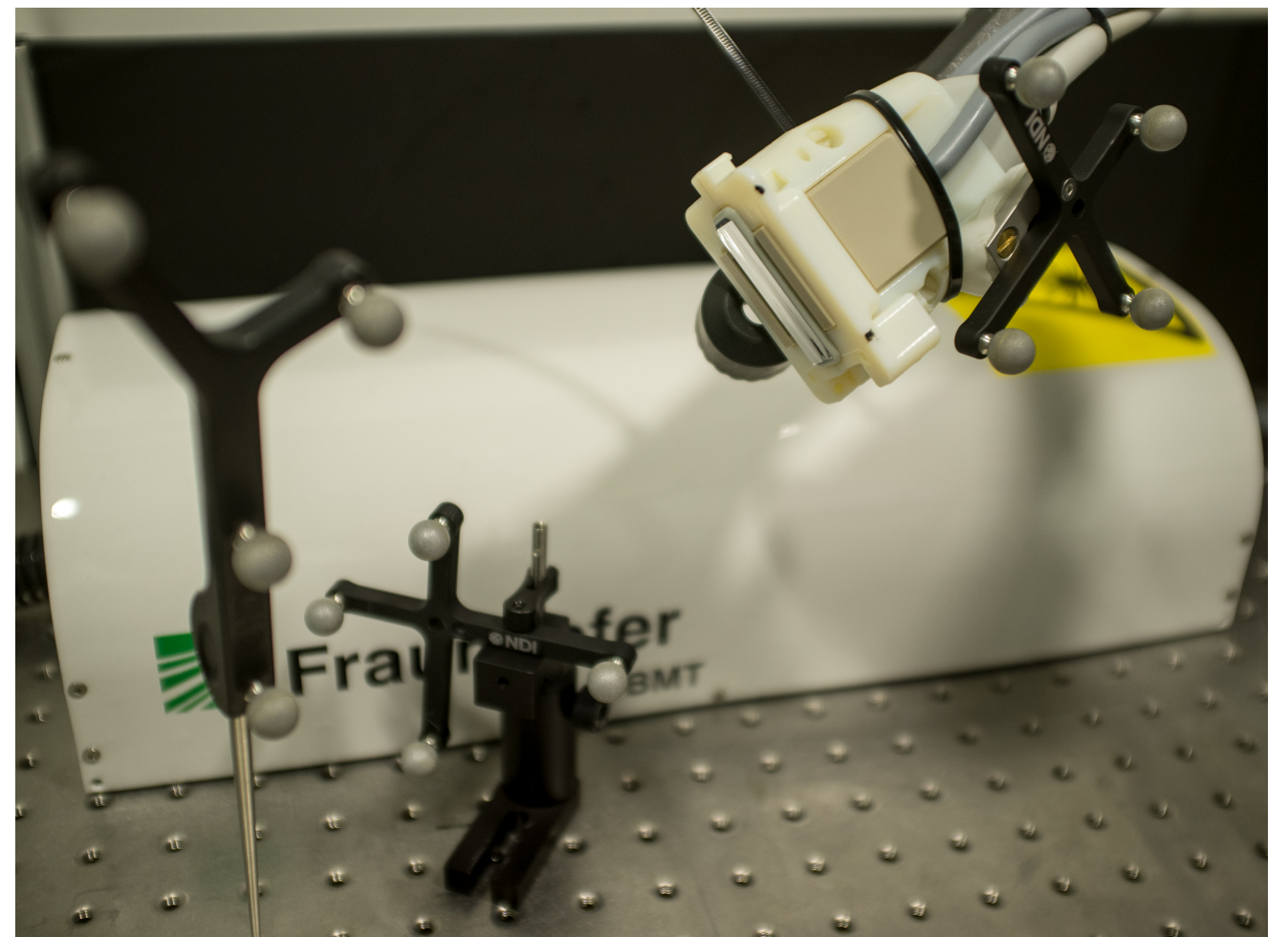
März et al.: "MITK-US: real-time ultrasound support within MITK", Int J CARS 2014

Franz AM, et al.: "EchoTrack For Simultaneous EMTracking And US Imaging: Initial Experience In Ventilated Swine Cadaver", CARS 2015

Current Examples in MITK-IGT: #2 — 3D Freehand Photoacoustic Tomography

Optical tracking with NDI Polaris

3D reconstruction via PLUS



Desirable OIGTL additions

For image data:

Option to add optional meta data

For tracking data:

Consistent format

Acknowledgements



**GERMAN
CANCER RESEARCH CENTER
IN THE HELMHOLTZ ASSOCIATION**



50 Years – Research for
A Life Without Cancer

CAI group

Alfred Franz

Lena Maier-Hein



**European
Commission**

Horizon 2020
European Union funding
for Research & Innovation