



CELTIC-NEXT



Proposers Brokerage Day

30th January 2026, Vienna

Pitch of the Project Proposal

**Bringing standardized medical
communication to personal mobile
health devices**



UNIVERSITÄT
LEIPZIG

Medizinische Fakultät

ICCAS

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Teaser

The Challenge

 The last years, 2 standards evolved for medical device communication


Our Goal

 create a bridge between them

ICCAS: Research and Development Department for medical Technology

Our work:

1. Go to or invite clinicians (physicians, nursing staff, technicians)
 - talk, simulate, look over shoulder, experience workflows
 - Capture real problems with an technician's view
2. transform into grants
 - Create solutions
 - ship solutions to private economy
3. Repeat
 - But researching new medical technologies involves patients ...

- Realistic replication of various medical environments
- Containing devices, workflows, recorded and synthetic data
- Experimental Platform for com-tech in the medical domain
- Combined through common modern and classical IT-Infrastructure
-  Test innovation in a regulation free environment

Ambulance



Ambulance



Operating Room



Patient ward



Proposal: Situation

- Medical Communication contains various standards
 - IEEE 11073 SDC, HL7-FHIR, DICOM, IEEE 11073 PHD
 - Unique for planned use or environments
- same use - but different environments
 - Use: abstract medical functions and standardize communication
 - SDC -> focus on stationary use (multi purpose)
 - PHD -> focus on mobile (battery)
- Therefore
 - SDC -> network orientated (IP, Ethernet, WiFi, etc.)
 - PHD -> peer orientated (Bluetooth)

SDC: Service Device Connectivity
PHD: Personal Health Devices



Proposal: Problem and Solution

- SDC and PHD introduced and use different protocols to achieve similar
- They are not compatible
- Projekt Idea
 - Create a Bluetooth compatible SDC device
 - Harmonize the taxonomies (based on existing work)
 - Test it in the different environments
 - Benefit: get rid of middleware hardware, grant physicians easy access to PHD
 - Goal: easy interoperable integration of PHD in SDC Networks like Ambulance, Ward, GP

Partners

Idea for consortium

Existing:

ICCAS | Computer Science and Engineering

University Hospital Leipzig| Healthcare Professionals and IT-Staff

Wanted:

Experts on Bluetooth Profiles Standardization and Development

Further testing-facilities or stakeholders

Or: Cooperations to bring in our use case

Contact Info

For more information and for interest to participate please contact:

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Presentation is available via:

