

Using Google Glass to enhance pre-hospital care



Agenda

- Context
- Goal
- Example case
- Added value
- Technical platform
- Technologies
- Current state of the project

Context

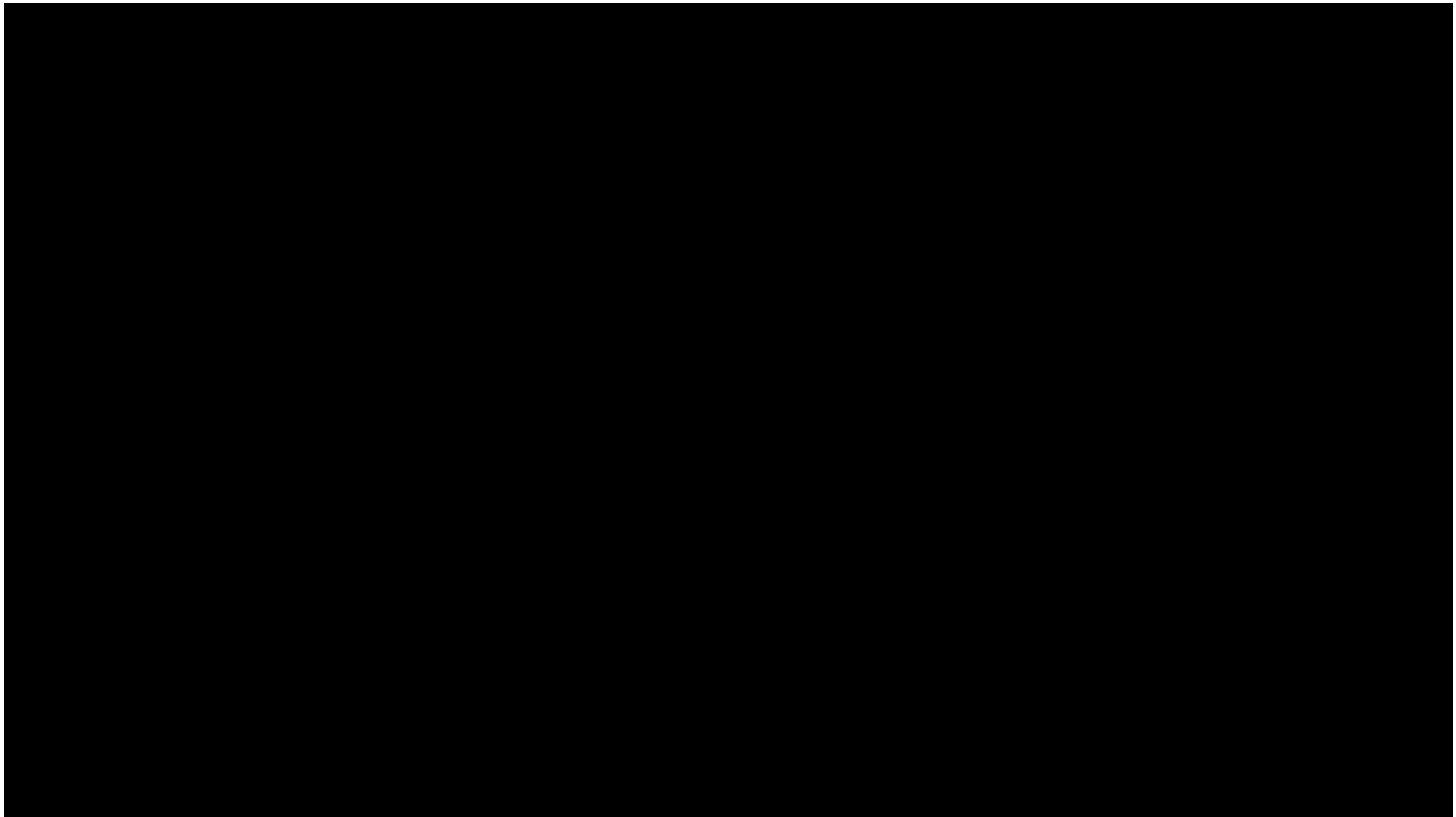
- Pre-hospital care is critical
 - Every minute counts!
 - Some situations need precise medical knowledge
 - Current state: a physician is engaged alongside paramedic crews.
 - >6000 times in 2011 in Valais (>60% of interventions)
 - Takes time to access the accident scene
 - Limited resources (medical and human)
 - Expensive

Goal

Using Google Glass to «bring» medical specialists on an accident scene

- Google Glass allows streaming and receiving information in a non-disruptive fashion
- Access to patients data & precise medical guidance from physicians

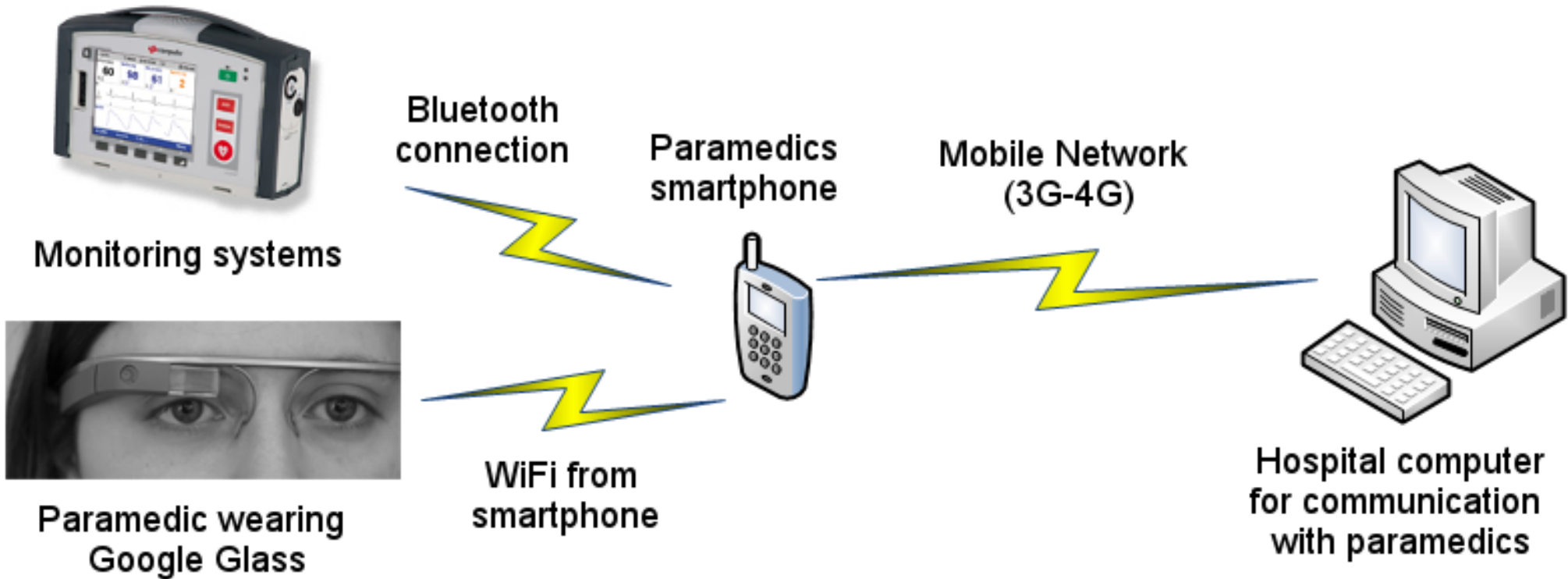
Example case



Added value

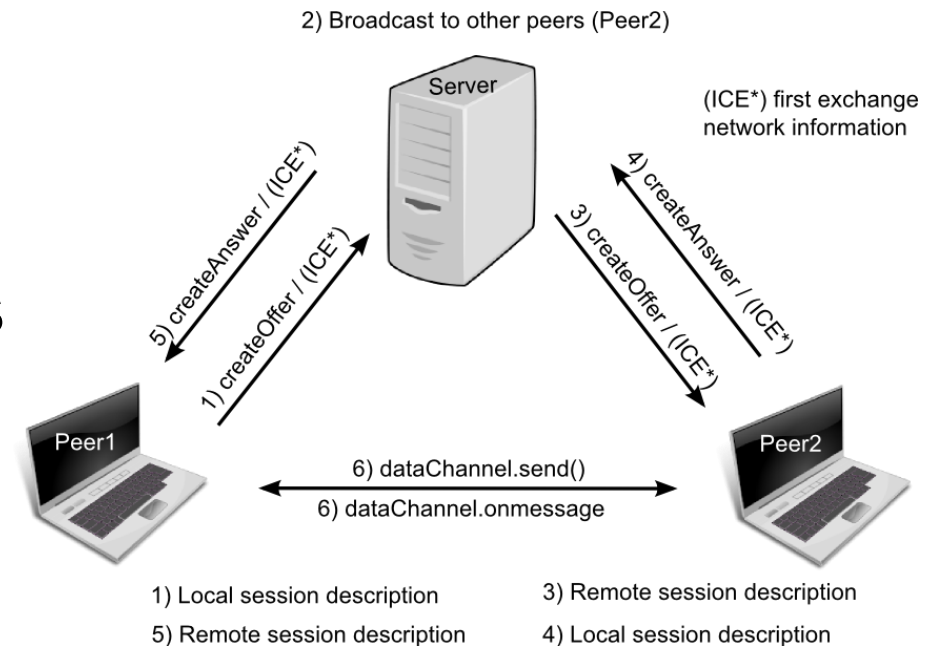
- Allows physicians to stay at the hospital
- Physicians can help multiple paramedic crews without traveling
- Vital parameters can be stored for more precise diagnosis made at the hospital
- Paramedics can access specific medical knowledge and patient history

Technical platform



Technologies

- Android for Google Glass
- WebRTC
 - Web user interface
 - STUN and TURN servers
- Node.js
 - Signaling server



Current state of the project

The screenshot displays a web application interface for an emergency intervention. The title is "Emergency Intervention -- Barry12". The interface is divided into several sections:

- Top Left:** A blue Star of Life medical symbol.
- Top Right:** The Hes·SO VALAIS WALLIS logo.
- Center:** A large panel displaying vital signs and ECG data. The heart rate is 185 bpm. Below the heart rate are several ECG waveforms. At the bottom of this panel, it says "Prêt pour ECG-D".
- Right Side:** A "Local Camera" section with a "Username : Guest" input field and a video feed showing a person in a white lab coat. Below the video feed is a "Start" button.
- Bottom Left:** A text input field labeled "Send to paramedics:" with a "Send" button.
- Bottom Center:** A patient information card for "John Doe" (DOB: 15.09.1983) with a "Medications" list containing "Lovenox" and "Monopril".

Conclusion

- Enhancing pre-hospital care in collaboration with Swiss paramedics.
- Google Glass might not be for everybody but can add value for medical staff.
- Hardware needs to be improved
- Real User tests need to be performed

Questions?

- Short movie on YouTube
 - Search keywords: Google Glass pre-hospital
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