



HIPERMED: High PERFORMANCE telemedicine platform  
 E3: Ehealth services Everywhere and for Everybody

Cost Effective e-health solutions for patients and doctors

Paris 29<sup>th</sup> June 2015

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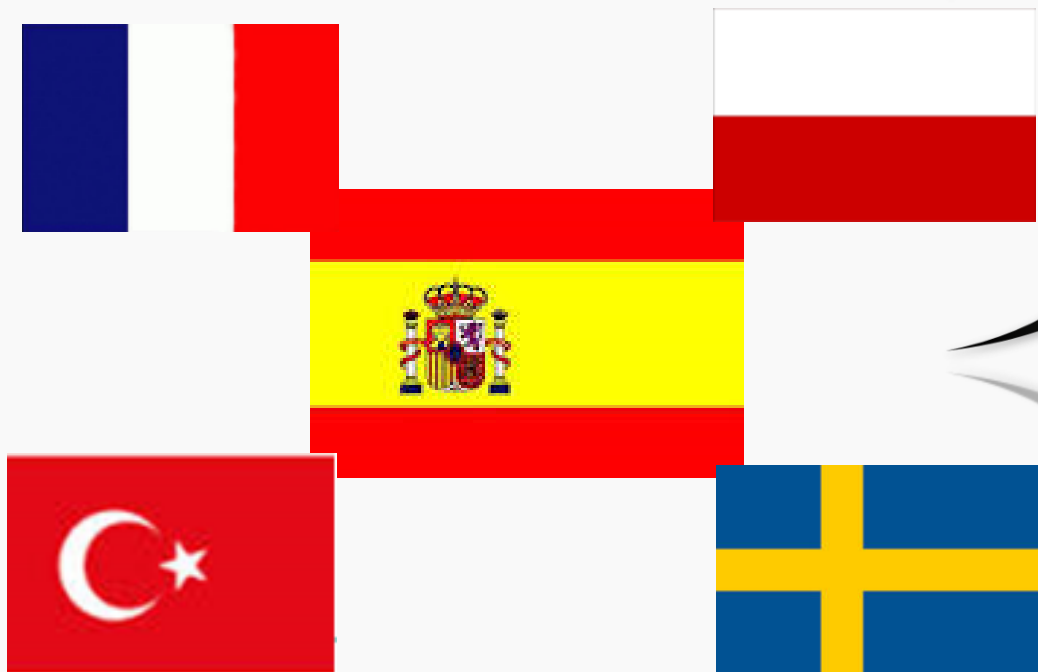


Centro para el Desarrollo Tecnológico Industrial





High  
PERformance  
teleMEDicine  
Platform  
CP7-007



# Project overview

- ❖ Designed and implemented an **OPEN HIgh PERformance teleMEDicine platform** based on a unified Service Oriented Architecture (SOA), providing media and control services over IP
- ❖ Exploits and extends the results from the HDVIPER Celtic Project



- ❖ Validated in 5 Healthcare Scenarios by patients, doctors and professors
- ❖ Currently under exploitation



# HIPERMED Project Awards



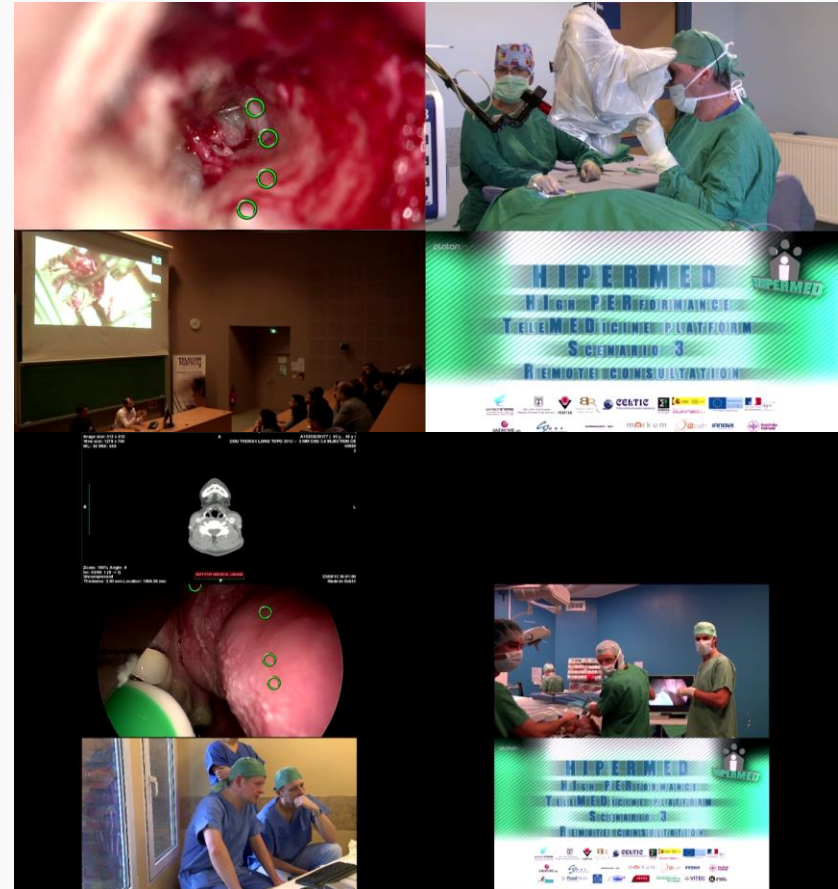
- ❖ **CELTICplus Award Silver 2014**
- ❖ **EUREKA ADDED VALUE  
Award Winner 2014**
- ❖ **EUREKA INNOVATION  
Award Winner 2014**



# External Final Users Validation

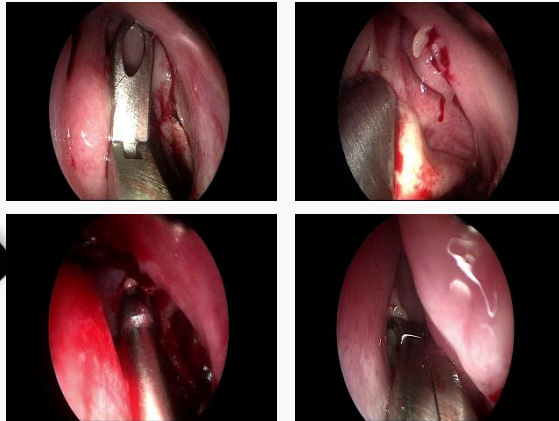


- ❖ Remote Lecture
- ❖ Planned
- ❖ Consultation
- ❖ Emergency Consultation

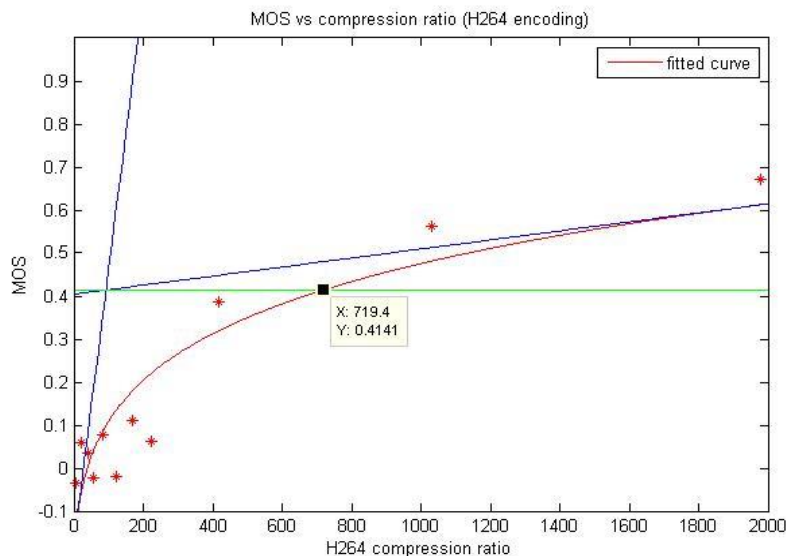


Hipermed clearly appears **relevant, efficient and effective** for professional usages. Under deployment in Sweden, France, Poland and Spain

# Video quality assessment: compression threshold



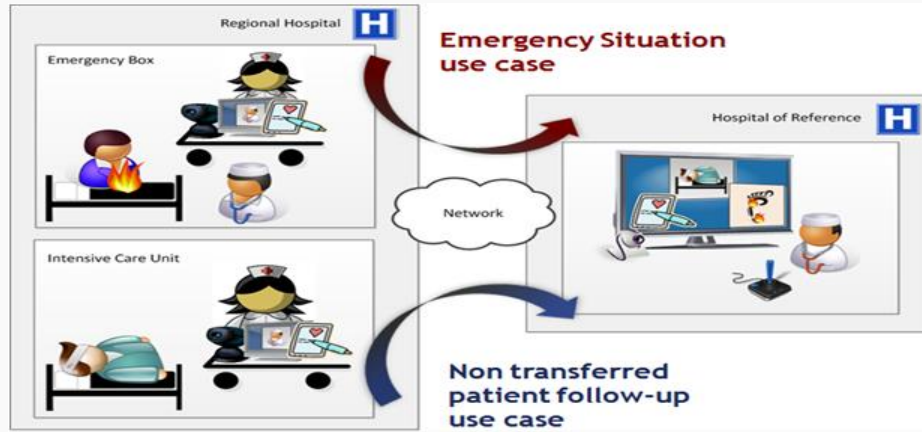
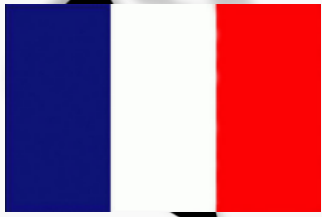
- ✓ ITU-BT.500-13 protocol for the **assessment of picture and video quality - double-stimulus continuous quality-scale (DSCQS)**
- ✓ **4 original ENT video test sequences at 3Gbits/s** (full HD resolution (1920x1080 – 60 Frames/s))
- ✓ **14 observers** with different ENT experiences in medical curriculum (intern, extern, resident, doctor, professor)
- ✓ **10 AVC/H.264 compression ratios**
- ✓ Comparison between **MOS** and **objective metrics**



Thanks to **expertise in compression** and in **quality assessment** we keep safe the quality of ENT videos for medical usages **down to about 3Mbps**



# E-health solutions for doctors: Tele Burn

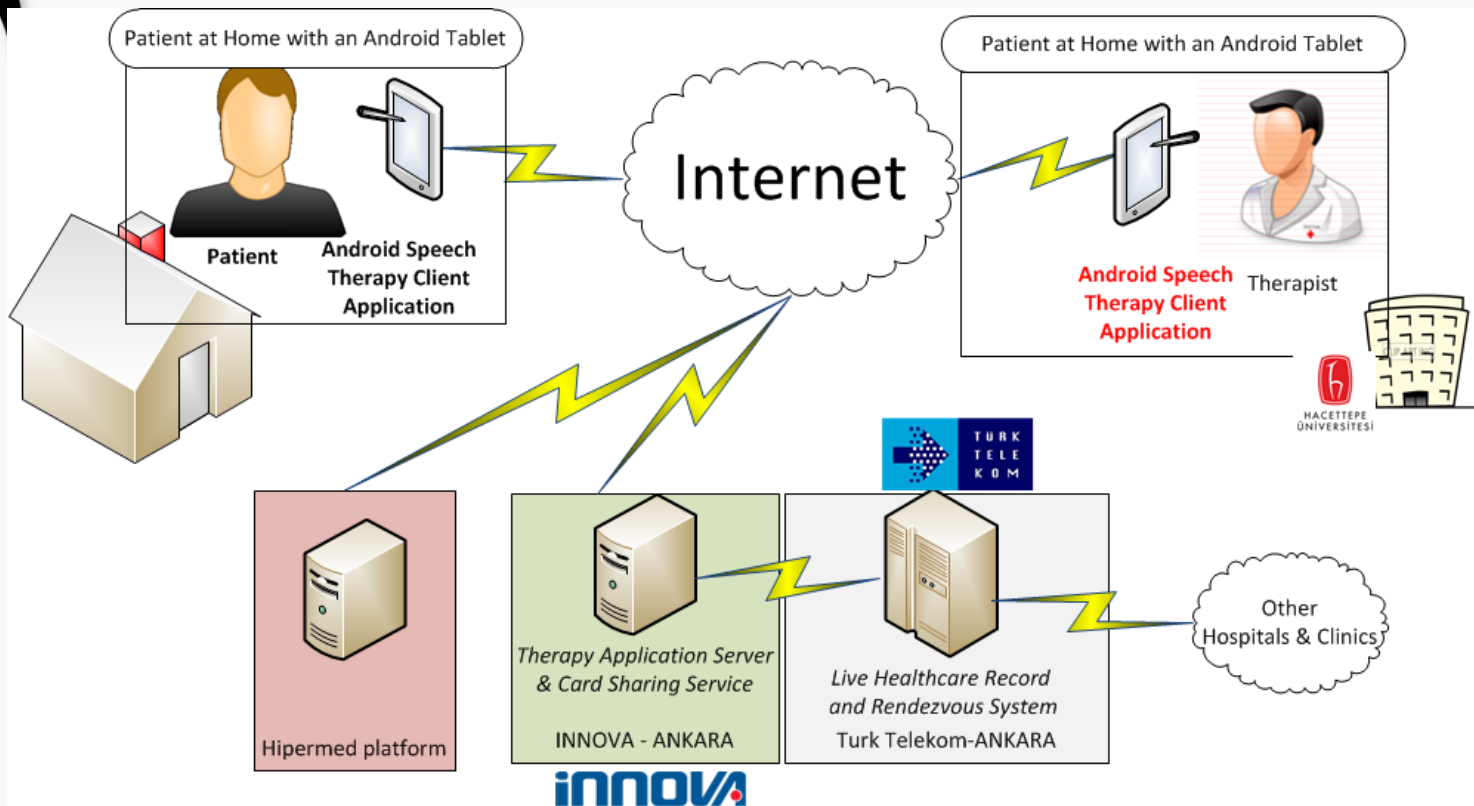




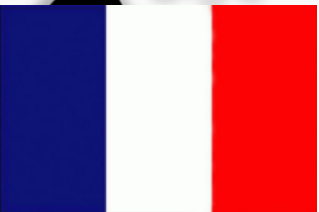
# E-health solutions for patients: Speech Therapy



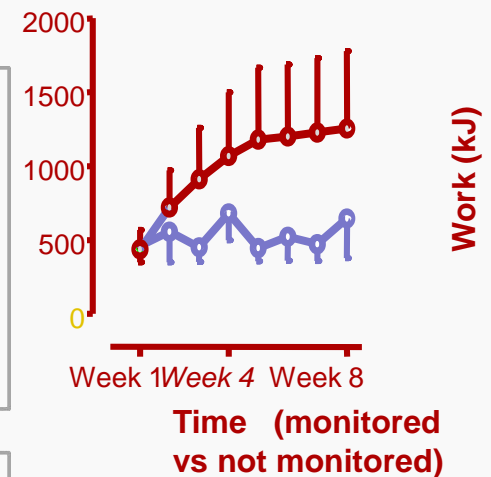
- ◆ Number of appointments attended by the patient increased
- ◆ Therapy cost due to transportation for the patient has decreased considerably
- ◆ Time devoted for therapy session has decreased for both: patient & therapist



# E-health solutions for patients: Cardio

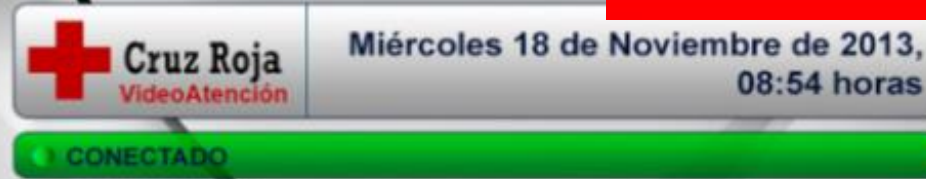


- ◆ Reduction in hospital admissions
- ◆ Improves patients quality of live and exercise tolerance



# E-health solutions for patients: videoconference

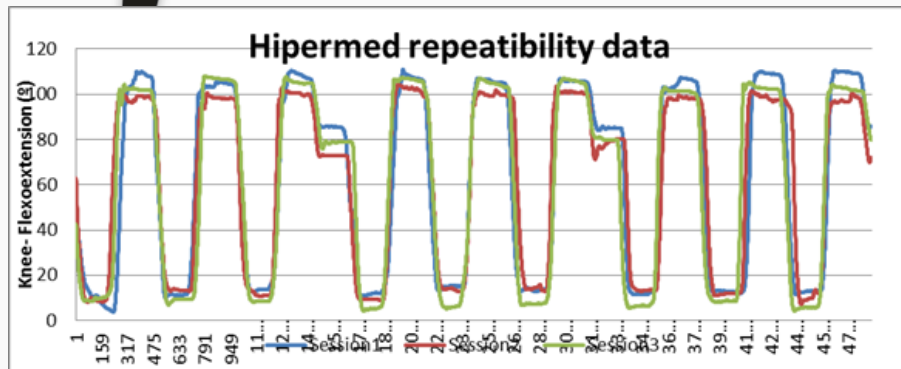
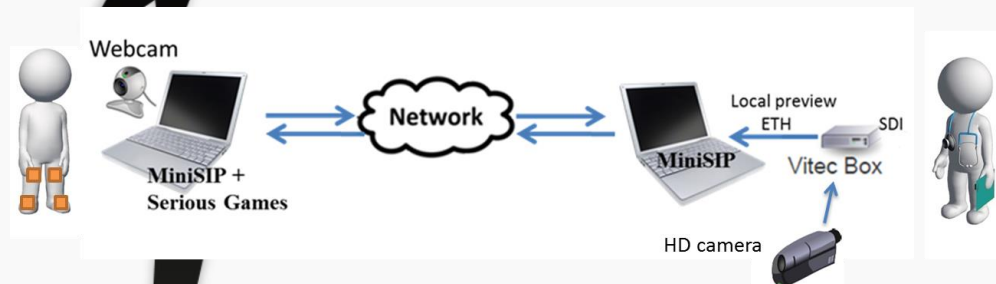
- ◆ Providing mobile videoconferencing to +2M people



# E-health solutions for patients: Rehabilitation



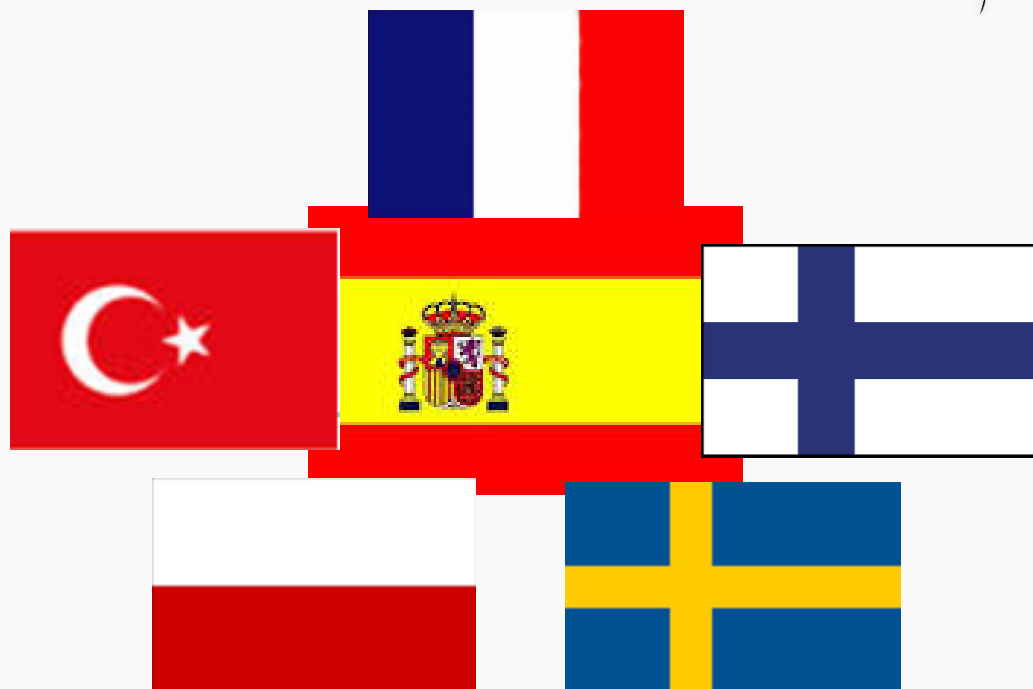
- ◆ 83% cost reduction
- ◆ 66% of patients prefer HIPERMED rehabilitation system vs conventional sessions



**E**-health services

**E**verywhere and for

**E**verybody



# Project overview

- ❖ Project started December 2014
- ❖ Design & implement an **E2E Platform** able to allow **Everybody access to E-health services Everywhere**
- ❖ Exploits and extends the results from the **HIPERMED Celtic** project



# KPI (Key Performance Indicators)

## ❖ Project Results Protection

- ❖ # Patents, trademarks, registered design, etc.:
- ❖ # Contributions to standards: **1 HEVC**
- ❖ # Standards followed: **Following HIPERMED defined standards: Medical and Video**
- ❖ # Master/PhD thesis contributing to/using project results: **1 VITEC-UL**

## ❖ Project Dissemination

- ❖ # Prototypes/Field Trials: **1 PROMETEE HIPERMED-E3 lab in Nancy (France) fully operational in June 2015. Formal inauguration for Sept/Oct Medical Congress.**
- ❖ # Medical Congress: **1 Nancy (France) in Sept/Oct 2015**
- ❖ # Journal Publications: :
- ❖ # Conference & Papers:
- ❖ # Dissemination Events: **4 in 2014 Before project Kick off, 4 in 2015 together with HIPERMED project**


## ❖ Project Exploitation

- ❖ # new products/services: **0**
- ❖ # Improved products/services: **1 NETICTEC/PSNC-UL improved HIPERMED Telco equipment**
- ❖ Sales: **1 NETICTEC/PSNC-UL sold 1<sup>st</sup> equipment to NANCY School of Surgery**
- ❖ Expected RoI (Return on Investment):
- ❖ # new companies created:

## ❖ Project Impact

- ❖ Technoeconomics:
- ❖ # new permanent employees hired for project R&D: **6**
- ❖ # new permanent employees hired for project exploitation:

# Exploitation Activities

- 
- A decorative black graphic on the left side of the slide, consisting of several overlapping, curved shapes that resemble a stylized plant or abstract design.
- ❖ E3 partners work on HIPERMED project exploitation as this will help us to cash in the investment as well as to define E3 project requirements and HIPERMED platform improvements.
  - ❖ HIPERMED project products have to be adapted to specific patients/doctors needs
  - ❖ Deploying E3 improvements in Nancy School of Surgery
  - ❖ Deployed a first Demonstrator in Nancy (France) in PROMETEE lab fully operational in June 2015
  - ❖ Working to standardize this solution in France and replicate in the other project country partners: Spain, Turkey, Finland, Sweden and Poland.





**E3 PROJECT**  
e-health solutions

Thank you!  
Questions?



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