

Project Partners



Bioengineering Department
Politecnico di Milano
<http://www.biomed.polimi.it/nearlab>



Department of Neurological, Neurophysiological, Morphological and Movement Sciences - University of Verona
<http://www.dsnmm.univr.it>



SIRSLab - Robotics and System Lab - University of Siena
<http://sirslab.dii.unisi.it/>



Department of Mechanical Engineering and the Institute of Biomedical Engineering - Imperial College
<http://www3.imperial.ac.uk/mechatronicsinmedicine>



Prosurgics Ltd — <http://www.prosurgics.com/>



Laboratory for CAS and Medical Image Processing - The Hebrew University of Jerusalem
<http://www.cs.huji.ac.il/~caslab/site/>



Faculty of Mechanical Engineering - Technion, Israel Institute of Technology
<http://robotics.technion.ac.il/>



Mazor Surgical Technologies Ltd
<http://www.mazorst.com/>



Lehrstuhl für Computeranwendungen in der Medizin, Institut für Informatik - Technische Universität München
<http://campar.in.tum.de/Chair/ResearchGroupCamp>



Institute for Process Control and Robotics Karlsruhe Institute of Technology (KIT)
<http://rob.ipr.kit.edu>



CF Consulting - Finanziamenti Unione Europea S.r.l — <http://www.cf-consulting.it/>

ROB CAS

www.robocast.eu

HOW TO REACH:

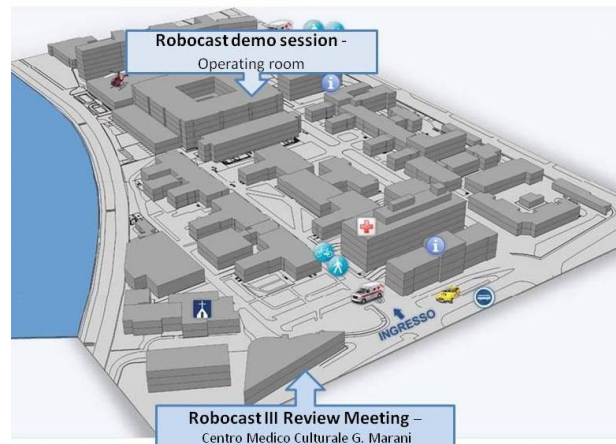
by car: exit the motorway at "Verona Nord" and then follow directions for Borgo Trento Hospital.

by plane: at Catullo Airport (http://www.aeroporto.verona.it/index_en.asp) Aerobus service available all days, every 20 minutes, to reach Verona Railway Station, then follow directions "by train".

by train: from Verona Porta Nuova Railway Station (www.trenitalia.it) bus connections to Borgo Trento Hospital every 20 minutes (lines: 21 - 22 - 23 - 24 - 41).

by taxi: Radiotaxi 24 hour service - +39045532666

Azienda Ospedaliera Universitaria Integrata di Verona - Borgo Trento



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Dr. Roberto Foroni : roberto.foron@univr.it



ROB CAS

ROBOt and sensors integration for
Computer Assisted Surgery and Therapy

FP7-ICT-2007-215190

III Review Meeting

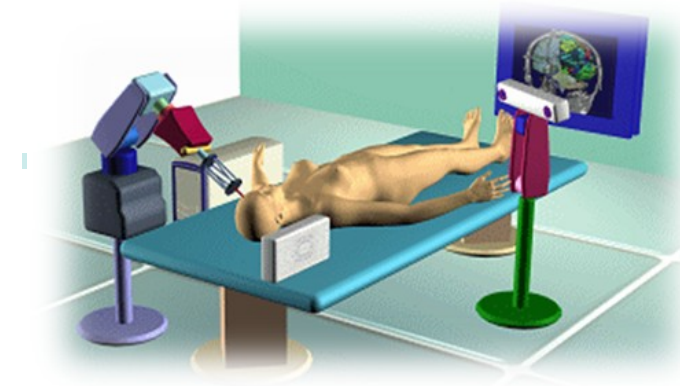
February 10th –February 11th, 2011

A.O. Universitaria Integrata di Verona

Borgo Trento

P.le A. Stefani 1

VERONA



Information & Communication Technologies

Challenge 2
DG Information Society & Media, sector E1
Interaction and Interfaces (DG INFSO-E1)
Luxembourg



The ROBOCAST project focused on robot assisted keyhole neurosurgery. This term refers to a brain surgery performed through a very small hole in the skull called burr hole. The reduced dimensions are the reason why it is called also "keyhole".

This surgery is carried out for several interventions, from endoscopy to biopsy and deep brain stimulation. Needles and catheters are inserted into the brain through the tiny hole for biopsy and therapy, including, among others the tasks of blood/fluid sampling, tissue biopsy, cryogenic and electrolytic ablation, brachytherapy, deep brain stimulation (DBS), diagnostic imaging, and a number of other minimally invasive surgical procedures. Related pathologies are tumours, hydrocephalus, dystonia, essential tremor, Parkinson's Disease, Tourette Syndrome, clinical depression, phantom limb pain, cluster headache and epilepsy. The ROBOCAST project outcome is a system for the assistance of the surgeon during keyhole interventions on the brain. It has a mechatronic part and an intelligence part. The mechatronic device consists of a robot holding the instruments for the surgeon and inserting them in the brain with a smooth and precise controlled autonomous movement. The trajectory is defined by the intelligence of the ROBOCAST system and is approved by the surgeon, which is and remains the responsible of the outcome, before the insertion of the surgical instruments.



10th—11th February , 2011
A.O. Universitaria Integrata di Verona
Borgo Trento
 P.le A. Stefani 1
 Verona

III ROBOCAST Review Meeting

February 10th 2011

- 10.30 - 11.30 Press conference
 (Speakers: **G. Ferrigno, S. Caffi, A. Fiaschi, M. Gerosa, S. Turazzi, G. Kenneth Ricciardi, L. Antiga, D. Prattichizzo** and **R. Foroni**)
- 13.00 - 14.30 *Lunch buffet*
- 15.30 - 16.00 The ROBOCAST project achievement during the third year (Speaker: **E. De Momi**)
 - System concept and architecture
 - The end-users involvement
- 16.00 - 16.20 WP3 (Speaker: **L. Frasson**)
 - Integration and tests
 - Q&A (10 minutes)
- 16.20 - 16.40 WP4 (Speaker: **A. Ahmadi**)
 - Integration and tests
 - Q&A (10 minutes)
- 16.40 - 17.00 WP5 (Speaker: **H. Monnich**)
 - Integration and tests
 - Q&A (10 minutes)
- 17.00 - 17.30 *Coffee break*
- 17.30 - 18.00 WP6 and WP7 (Speaker: **E. De Momi**)
 - Integration and tests
 - Q&A (10 minutes)
- 18.00 - 18.20 Dissemination and management (Speaker: **C. Finocchiaro**)
- 18.20 - 18.40 Exploitation (Speaker: **R. Nadler**)
- 18.40 -19.00 Round table: what next? (Moderators: **G. Ferrigno** and **D. Prattichizzo**)
- 19.00 - 19.05 Closure of the day

February 11th 2011

- 9.00 – 11.30 Demo session
- 12.00—13.00 Time for reviewers and officer meeting
- 13.00—13.30 Closing session
- 13.30 - 14.30 *Lunch buffet*

