



Press release
ROBOSOFT/PRISME



A first for ROBOSOFT, PRISME and their partners: robotised tele-ultrasound examination via satellite

July 30th, 2008 : Partners in the European MARTE (MOBILE And ROBOTISED TELE-ECHOGRAPHY) project, in collaboration with ROBOSOFT, carried out the first robotised tele-ultrasound examination via satellite. This demonstration was accomplished with an ESTELE robot entirely controlled by the robuBOX®.

For the demonstration, ROBOSOFT made the ESTELE robot available to the project partners. Within a month after familiarization with the software development tools for the robot, researchers at PRISME developed and implemented the software for internet communication via satellite between a control station in France and a remote robot carrying an ultrasound probe used to examine a patient onboard a ship sailing the Mediterranean.

"These kinds of projects show the soundness of the generic approach used in the robuBOX", says Vincent Dupourqué, CEO of ROBOSOFT. "The standard tele-ultrasound robot was originally delivered for use in a classic video-conferencing system over the phone lines. Thanks to the robuBOX development toolkit, included with the standard robot, a customer can add his own functionalities, and can also integrate the robot into a larger system". For this project, the PRISME Institute handled adapting the robot software using Microsoft® Robotics Developer Studio.

The ESTELE robot is an example of cooperation between research and industry: designed, developed, and patented by a public-sector research laboratory, it was industrialized and marketed under licence by ROBOSOFT. It is controlled by the robuBOX, a "universal robotics engine" adapted for the expanding market for service robots. Several robots equipped with preliminary versions of the robuBOX have already been deployed: Estele, the tele-ultrasound robot used in this project; robuCAB, an autonomous GPS guided vehicle; as well as general-purpose mobile platforms such as the robuLAB¹⁰ for domestic help or the robuROC for security and military applications. The robuBOX, which allows customers to build numerous advanced robotics applications, was developed and can be modified using Microsoft® Robotics Developer Studio (see <http://www.microsoft.com/robotics>).



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About ROBOSOFT

ROBOSOFT is the European leader in service robot solutions. With over 20 years of scientific and industrial expertise in this domain, ROBOSOFT has been supplying advanced robotics solutions in the transportation, cleaning, supervision, health and research industries since 1985.

Beyond professional applications, the era of personal robotics is approaching fast. ROBOSOFT believes that its service robots, called "roboters", will be part of everyday life within the next five years. According to the Japan Robotics Association's predictions, the world market for service and personal robotics will reach 17 billion dollars by 2010. Roboters will make everybody's life easier in activities such as amusement, education, culture, health, assistance for the elderly and the handicapped, etc. In order to make these applications real, ROBOSOFT already integrates 80% of programming complexity into its robuBOX, a module programmed using Microsoft Robotics Developer Studio. robuBOX is already incorporated into the heart of ROBOSOFT robots, but can also be licenced to robotics integrators and manufacturers for mass production.

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About PRISME

This new research institute comprises some 170 university researchers, engineers, technicians, and doctoral students at several locations: Bourges, Orléans, Chartres, Châteauroux, Paris. The PRISME Institute conducts multidisciplinary research covering a wide spectrum within the general domain of engineering sciences: combustion in engines, energetics, aerodynamics, mechanics of materials, image and signal processing, control theory and robotics. The institute is jointly administered by the Bourges Higher National School of Engineering and the University of Orleans.

See http://www.ensi-bourges.fr/squelette/article.php3?id_article=274
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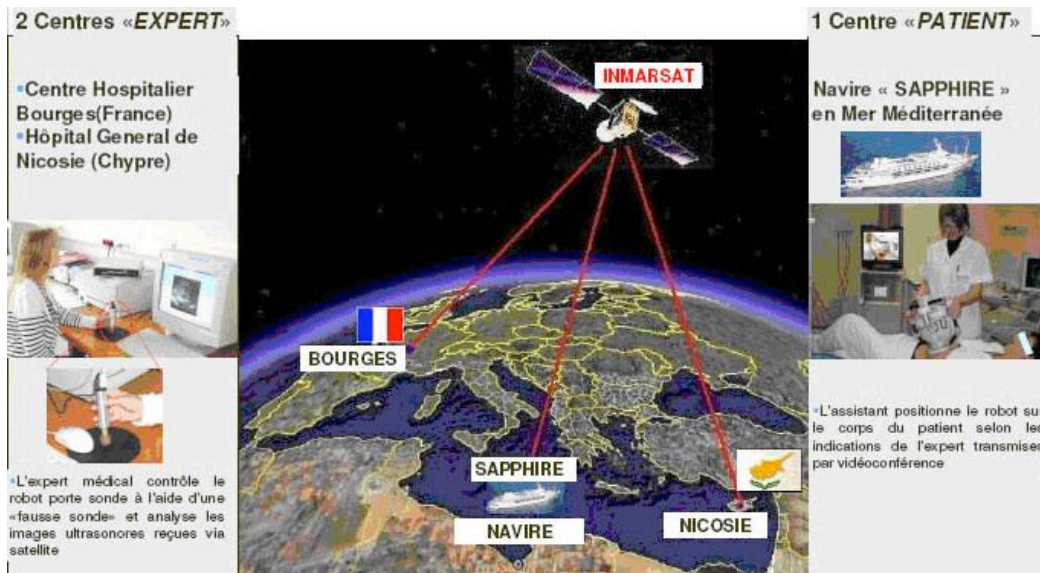
PRESS RELEASE

MARTE III : MOBILE And ROBOTISED TELE-ECHOGRAPHY III



Within the framework of the MARTE research program, a group of French and Cypriot researchers prepared the final stages of ultrasound testing planned for the examination of shipboard patients. This robotised ultrasound experiment took place June 6th to 11th 2008 in the eastern Mediterranean. The MARTE program is an extension of the european OTELO program (2001-2004), which enabled the development of the design and components of the robotised ultrasound processing pipeline. The MARTE III project leaders are: Cyril Novales (Prisme Institute of the University of Orleans, France) and Sotos Voskaridis (Technological University of Limassol, Cyprus). The project consortium consists of the Technological University of Cyprus (TEPAK), the Institut Technique Supérieur (ATI), the University of Cyprus (UC), the University of Orleans (PRISME Institute, France), in collaboration with the Nicosia Hospital Radiology Department, the Regional Hospital in Bourges, the Regional University Hospital in Tours, and Robosoft (France). The experimental configuration of this world's first was the following: the ultrasound specialist doctors were located in the medical centers on land (Nicosia General Hospital and the Bourges Regional Hospital). Another project team was onboard the cruise ship "SAPHIRRE" of the Louis Cruise Lines company. The communication link was via the INMARSAT satellite and the BGAN (Broadband Global Area Network) technologies. The robotics system used for the experiment is ESTELE, the teleechography robot made by Robosoft and developed in collaboration with the PRISME Institute of the University of Orleans.

This research program was financed by the Foundation for the Promotion of Research (IPE – Cyprus) and its French counterpart "Egide". It is administrated and supported by the Telecommunication Authority of Cyprus (CYTA) and implementation was made possible thanks to the involvement of the Cypriot companies Louis Cruise Lines, Tototheo (for the SAILOR satellite FBB-500 antennas), and eNet Solutions (Polycom videoconferencing system), and the French companies Robosoft and SonoSite–France (ultrasound equipment).



The scientific, technological, and socioeconomic outcomes of the project will lead to the deployment at the European and worldwide scales of this medical robotics application. The expertise of highly qualified radiologists, centralized in hospitals, will now be available to answer requests for remote ultrasound examinations, thus offering high-quality care to patients even in isolated areas. This remote diagnostic tool will also be accessible to patients located, for example, on board long-distance transport (eg, high-speed trains, airplanes, etc.).