The 2014 underwater archaeological mission on the shipwreck of the Lune, in the framework of the Corsaire Concept Project: scanning and sampling artefacts with robots

Michel l’Hour, Vincent Creuze

To cite this version:
Michel l’Hour, Vincent Creuze. The 2014 underwater archaeological mission on the shipwreck of the Lune, in the framework of the Corsaire Concept Project: scanning and sampling artefacts with robots. EUROCAST: Computer Aided Systems Theory, Oussama Khatib; Maarja Kruusmaa; Eduardo Silva; Dario Sosa, Feb 2015, Las Palmas de Gran Canaria, Canary Islands, Spain. lirmm-01120053

HAL Id: lirmm-01120053
https://hal-lirmm.ccsd.cnrs.fr/lirmm-01120053
Submitted on 24 Feb 2015

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L’archive ouverte pluridisciplinaire HAL, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d’enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.
The 2014 underwater archaeological mission on the shipwreck of the Lune, in the framework of the Corsaire Concept Project: scanning and sampling artefacts with robots.

Michel L'Hour¹, Vincent Creuze²

¹Ministère de la Culture et de la Communication. Direction générale des patrimoines Département des recherches archéologiques subaquatiques et sous-marines 147 plage de l'Estaque. 13016 Marseille - France
²Laboratoire d'Informatique, de Robotique et de Microélectronique de Montpellier - LIRMM Université Montpellier 2, LIRMM UMR 5506, CC477 161 rue Ada. 34095 Montpellier Cedex 5 - France

Abstract. The "Corsaire Concept Project" aims at developing new robotic systems in order to explore and excavate archaeological sites at great depth. It involves several laboratories from France and Europe, as well as industrial partners, under the supervision of the DRASSM (French Ministry of Culture) and the FDS Med institution.

1 The Corsaire Concept Project

Since November, 6, 1664, close to the French shipyard of Toulon, the shipwreck of the Lune lies 90 meters deep, remarkably preserved. Yearly, in fall, the trials of the Corsaire Project consortium and it's invited partners are performed in this exceptional environment, thus allowing the estimate of the performances of the developed robotic tools under real conditions. This year, for the wreckage's 350 years celebration, sensing and sampling methods have been evaluated. The team has not only tested 3D laser scanning methods and underwater omnidirectional cameras, but also two new grasping devices, specifically designed for the project, and embedded on a mini-ROV: a mobile claw, and a 2000 meters depth rated robotic hand.

This talk will first remind the story of the Lune, focusing on its remarkable state of conservation and its historical interest. Then the Corsaire Project will be presented, and the tests performed this year on the shipwreck will be detailed and analyzed. This talk will be illustrated by many unreleased pictures and movies.

Fig. 1. The miniROV used in The Corsaire Project