V-MUST DEVELOPMENT CAMP:
CALL FOR MOBILITY (C4)

University of Balearic Islands (UIB) (Spain)
Title: Virtual reconstruction of the Cathedral of Majorca

1. Name of the hosting institution	University of Balearic Islands (UIB) (Spain)
2. Brief description of the unit hosting the internship	Research group expert in Computer Graphics, Vision and Artificial Intelligence
3. Max number of internships/year	2
4. Areas of host institution's expertise for internship proposals	Virtual reconstruction
5. Project description *Brief description of any specific programme of work that the host wishes the intern to carry out (optional)*	The objective of our investigation is two-fold: first of all to present the capability of laser technology by means of 3D scanned images of buildings and structures. Secondly, to show the relevance of 3D scans in preventive conservation plans of our cultural heritage. This technology has allowed us to consider the operative possibilities that the laser offers to performance protocols, once the restoration process is concluded. The recent intervention carried out on the Royal Chapel of the XVI century cathedral of Majorca has made possible the investigation of the uses derived from the 3D scanned images related to the digital and metrologic storage of the whole surface and integrated plastic elements. Laser technology was applied on a recently restored artistic collection, work of Catalan architects Antoni Gaudí and Josep Maria Jujol between 1908 and 1909. The collection is formed by a polychromatic ceramic surface, the Episcopal stone chair with graffiti and gilded, and a set of four wrought, polychrome, iron candlesticks. A database of documentary contents has been created in order to prepare the corresponding plan of preventive conservation. This database is divided into three parts: • *Methodological:* performance protocol definition of the laser scanner and processing of the obtained information. • *Documentary:* Accommodation of an operative model from a digital and metrological database. • *Experimental:* Interactive training with other computer and technological applications in order to guarantee its permanent update. The unprecedented nature of this investigation in the field of preventive conservation, the singularity of the artistic work object of this application, and the historical dialogue between contemporary art and the monumental medieval set of the relevant Cathedral of Majorca, creates an innovative bond between applied sciences and patrimony conservation.
6. Benefit to host *Areas in which the host wishes to develop expertise through*	

collaboration with an intern (optional)	
7. Internship profile *Please indicate the "essential" and "preferred" skills and/or qualifications that applicants should have*	*Essential* Programmer with experience or interest in computer graphics and 3D modelling of objects and buildings.
8. Preferred period *Please give the earliest possible start date, and the latest possible end date for hosting interns*	Starting in January or September 2012, 2013, 2014
9. Min/max duration (usually between 12 and 24 weeks)	8 - 24 weeks
10. Accommodation support (where applicable)	Help in finding apartment
11. Facilities and Supervision *Please describe the workspace, equipment, training, supervision hours per week etc. that the host will provide*	All hardware and software, internet access and technical permissions necessary to carry out the agreed programme of work will be provided. Overall supervision of the internship programme will be undertaken by Dr. Francisco José Perales López, who will also ensure that any training in technologies and methods that may be required will be provided.
12. Contact Details of Supervisor. **a. Name:** **b. Address:** **c. E-mail:** **d. Telephone:**	Dr. Francisco José Perales López Unidad de Gráficos, Visión por Ordenador e Inteligencia Artificial Dpto. de Matemáticas e Informática Universidad de las Islas Baleares Edif. Anselm Turmeda Ctra. De Valdemossa Km. 7,5 0722 Palma de Mallorca (Baleares, Spain) paco.perales@uib.es