

Network Action Proposal

Title:	Dr.
Membership number(s)	62
Member name(s)	Barbara Caputo
Member institute/company name(s)	IDIAP
Goals of the action	<p>I ask financial support for a research visit to the units of health physics and radiology of the 'Azienda ospedaliera San't Andrea', University of Rome 'La Sapienza'. The contact person for the visit is Dr. Laura Chiacchiararelli, head of the health physics unit.</p> <p>Health care settings produce nowadays increasing quantities of visual data; many hospitals have archives of several terabytes. These would be precious resources for tasks such as diagnosis, treatment planning, research and teaching. Successful technologies for structuring, accessing, analyzing and managing these databases should keep into account two vital factors:</p> <ol style="list-style-type: none"> (1) medical image interpretation (with diagnostic, educational or research goals) is the pivotal cognitive activity of a practicing physician. Research efforts on the analysis of the meta-cognition of clinical diagnosis have emphasized the complex and dynamic structure of the image interpretation task. Any algorithm not keeping into account the cognitive nature of the process is doomed to fail (apart for very limited scopes and domains) (2) the search behavior for and use of visual medical information by health-care operators is a key information both for identify and study the cognitive processes involved in the task, both for designing algorithms that really answer to the needs of the intended final users. <p>During my visit, I will</p> <ol style="list-style-type: none"> (1) teach a mini-course (3h) on 'Cognitive vision for medical imaging'. The course is intended for a wide audience, including clinicians, PhD students of various programs (medical physics, medical informatics ...) and so forth. The course will give a general overview on the concepts of image understanding and visual categorization, and will map these ideas into the medical domain. (2) conduct a qualitative user survey among medical professionals. The goal of the survey is to gain insight into how the visual information is currently treated and used. The survey will be done along the line of two similar studies performed at the Oregon Health & Science University and at the University Hospital of Geneva. <p>The immediate goal of the action is to start a dialog between cognitive vision researchers and health-care professionals; the short-term goal is to identify common research interests and start a collaboration between IDIAP and the Sant'Andrea hospital. The long-term goal of the action is to build knowledge and expertise in the field so to be able eventually to come up with a competitive research proposal (possibly a EU project?) on this topic.</p>

<p>Principal activity to which it contributes</p> <ul style="list-style-type: none"> <input type="radio"/> Community Outreach <input type="radio"/> Scientific Outlook <input type="radio"/> Education & Training 	<p>The principal activity this action contributes to is 'community outreach'. As I will make a mini-course on cognitive vision for medical imaging, this action contributes also to the 'education and training' activity.</p>
<p>Concrete outcomes of the action (at least one of which should be material suitable for publication on the euCognition website)</p>	<p>The concrete outcomes of the action will be</p> <ol style="list-style-type: none"> 1) the slides of the mini-course, which will be available for uploading on the EuCognition site immediately after the conclusion of the visit 2) a report on the survey among the health-care professionals. The analysis of these data and the preparation of the report might take some time, so it should be agreed with the EuCognition board if they prefer to have the slides uploaded straight away and the survey later on, or to have all the material uploaded all together. This I think will be also related with the refunding of the action; I personally would have no problems in waiting for the refunding until the survey is finished and uploaded (my personal estimate: sometime in November)
<p>Effort in person-days that will be charged to the Network Action (if any)</p>	<p>6</p>
<p>Expected start and duration in months</p>	<p>beginning 24/09/2006; end 30/09/2006</p>
<p>The requested funding, under the following headings:</p> <ul style="list-style-type: none"> <input type="radio"/> Travel Costs <input type="radio"/> Other Costs (check with the Network Coordinator if you aren't sure about eligibility of these costs) <input type="radio"/> Labour Costs (identify the number of person-days and the rate per day). 	<p>travel costs: standard contribution to subsistence and accomodation --> 150 euros per day* 6 days = 900 euros</p> <p>two way flight ticket Geneva/Rome --> 100 euros (estimate via EasyJet)</p>
<p>Please identify any other sources of funding that contribute to this Action (actions to support events such as workshop and conferences should include an outline budget identifying the total cost)</p>	<p>None</p>