



PROJECT PERIODIC REPORT

Grant Agreement number: 217077

Project acronym: EYESHOTS

Project title: Heterogeneous 3-D Perception across Visual Fragments

Funding Scheme: Collaborative project

Date of latest version of Annex I against which the assessment will be made: 05/10/2007

Periodic report: 1st ☐ 2nd ☐ 3rd ☒

Period covered: from 01/03/2010 to 28/02/2011

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5 Project management

5.1 Management activities

Consortium management during the third year concerned mainly the coordination of preparatory activities for the final demonstrations. Notwithstanding the major workload accumulated in the third period with respect to the Roadmap plans, the other planned activities remained on schedule and no deviations from the planned milestones and deliverables occurred.

Coordination activities during the period

- Project monitoring carried out by the Project Coordinator by checking the interaction between consortium members, and by checking the progress of the work on a regular period.
Specific effort was paid to coordinate the engineering steps towards the integration of the computational modules on the robotic platforms (e.g., see the Roadmap) and the decisions for the final demonstrations. The brisk actions of partners and their cooperative attitude have made the concrete achievement of most of the objectives planned in the Roadmap possible.
- Preparation of the periodic meetings and supervision of the subgroup meeting activities.
- Communication with and between partners to ensure on-time schedule of the project, and request of approvals for specific formal decisions (through the usual mailing list hosted by UG, eyeshots@unige.it).
- Communication with the partners and the EC concerning financial and legal aspects.
- Documents, data, and software tools have been shared through the private area of the project website and from the SVN repository hosted at the University of Chemnitz (<https://ai.informatik.tu-chemnitz.de/repos/eyeshotsAttention-ext/>). Material from meetings (agenda, presentations, minutes, etc) is made available to the consortium through the project's website.
- The EYESHOTS literature database has been continuously updated providing a common basis for teaching and education of students.
- Brief notes on subgroup meetings are collected and made available on the private area of the EYESHOTS website, <http://www.EYESHOTS.it/private/minutes.php> to ensure a continuous monitoring of cooperative work towards the objectives.
- All the partners contributed to communicate and announce, through the mailing list and the web-site, forthcoming events, Call for Papers, News and Highlights from the scientific community on topics related to the project's research activities.
- Periodically, publications from the consortium have been collected and published in the website, together with the public deliverables due in the period.
- Quality check procedures for each deliverable before submission were regularly performed.

List of project meetings and cross-visits

Regularly, plenary meetings took place with a semester period to check the progress across partners and work packages, to discuss about dissemination activities and to coordinate and plan subgroup interactions:

- **2nd review meeting, 19 May 2010, Leuven.**
Participants: Patrizia Fattori, Claudio Galletti (UNIBO); Fred Hamker (WWU); Markus Lappe, Robert Volcic (WWU); Marc Van Hulle, Nikolay Chumerin, Karl Pauwels (K.U.Leuven); Angel del Pobil, Beata Joanna Grzyb, Marco Antonelli (UJI), Silvio Sabatini, Giorgio Cannata, Agostino Gibaldi, Andrea Trabucco (UG).
- **2nd year review – debriefing meeting, 20 May 2010, Leuven.**
Participants: Patrizia Fattori, Claudio Galletti, (UNIBO); Markus Lappe, Robert Volcic (WWU); Marc van Hulle, Nikolay Chumerin, Karl Pauwels (K.U.Leuven); Marco Antonelli (UJI); Silvio Sabatini, Giorgio Cannata, Agostino Gibaldi, Andrea Trabucco (UG).
- **Month 30 periodic meeting, 27 September 2010, Castellon de la Plana.**
Participants: Patrizia Fattori (UNIBO); Fred Hamker, Frederik Beuth (WWU); Markus Lappe, Katharina Havermann, Svenja Wulff (WWU); Marc Van Hulle, Nikolay Chumerin, Karl Pauwels (K.U.Leuven); Angel

del Pobil, Eris Chinellato, Beata Joanna Grzyb, Marco Antonelli (UJI), Silvio Sabatini, Andrea Canessa, Agostino Gibaldi (UG).

▪ ***Month 36 periodic meeting, 3 February 2011, Castellon de la Plana.***

Participants: Patrizia Fattori, Claudio Galletti (UNIBO); Fred Hamker, Frederik Beuth (WWU); Markus Lappe, Roman Liepelt, Kai Schreiber, Katharina Havermann, Svenja Wulff, Anna Stenzel (WWU); Marc Van Hulle, Nikolay Chumerin, Karl Pauwels (K.U.Leuven); Angel del Pobil, Eris Chinellato, Beata Joanna Grzyb, Marco Antonelli, Ester Martinez (UJI), Silvio Sabatini, Giorgio Cannata, Agostino Gibaldi (UG).

In addition, several subgroup meetings took place at the fringes of the periodic plenary councils or through specific cross-visits to coordinate collaborative activities among partners.

▪ ***Specific subgroup meetings***

Bologna, Italy 08-27/03/2010

UNIBO: Patrizia Fattori, Rossella Breveglieri, Claudio Galletti, Annalisa Bosco

UJI: Eris Chinellato

Discussed topics: Data analysis; joint publications; modelling issues.

Decisions: Compare and assess the results of different approaches to data analysis, task assignment for new data; review and discuss joint publications; define modelling details for employing UNIBO findings in UJI model of sensorimotor integration.

Venice, Italy 23/03/2010

WWU: Markus Lappe

UJI: Eris Chinellato

Discussed topics: Modeling concept for multimodal peripersonal space representation.

Decisions: Gain field model including version, vergence, and arm position.

Bologna, Italy 23-25/03/2010

UNIBO: Patrizia Fattori, Rossella Breveglieri, Claudio Galletti, Annalisa Bosco

WWU: Markus Lappe

UJI: Eris Chinellato

Discussed topics: Modelling issues.

Decisions: Define modelling details for mimicking WP5 experimental data in the UJI model of sensorimotor integration.

Bologna, Italy 24-25/09/2010

UNIBO: Patrizia Fattori, Claudio Galletti

WWU: Markus Lappe

Discussed topics: (1) Attention experiment; (2) Saccadic adaptation in the monkey.

Decisions: Types of data analysis for joint publication. Setup for saccadic adaptation experiments.

Genoa, Italy 14-20/03/2010

K.U.Leuven: Nikolay Chumerin

WWU: Frederik Beuth.

UG: Agostino Gibaldi, Andrea Trabucco, Manuela Chessa, Fabio Solari, Andrea Canessa, Giorgio Cannata, Silvio P. Sabatini

Discussed topics: VCCA system - (1) Integration of all modules in Simulink; (2) The image processing pipeline (simple space-variant strategy for vergence and version).

Decisions: Interfaces among modules; I/O data format; Simulation parameter setting; Plan of vergence test and version with attention tests.

Documentation: Technical notes on VVCA.

Castellon de la Plana, Spain 27/09/2010

UNIBO: Patrizia Fattori, Claudio Galletti

WWU: Katharina Havermann, Markus Lappe, Svenja Wulff, Fred Hamker

UJI: Marco Antonelli, Eris Chinellato

Discussed topics: (1) Saccadic adaptation experiment in monkey. (2) Experiments on the robotic platform for validation; (3) Saccadic Adaptation on the robotic system.

Decisions: Data analysis for saccadic adaptation in the monkey. Consider saccadic adaptation on robotic platform with spatial and motor error signal as validation task. Test saccadic adaptation on simulator.

Castellon de la Plana, Spain 29-30/09/2010

K.U.Leuven: Nikolay Chumerin

WWU: Frederik Beuth

UG: Agostino Gibaldi, Andrea Canessa

Discussed topics: (1) Vergence control scheme; (2) Real-World Range Datasets application

Decisions: (1) Decision on components of vergence control scheme; (2) Decision on Real-World Range Datasets application: (i) documentation and dissemination of the tool (M.Chessa), (ii) reproduction of the experiment for disparity pattern statistics assessment and comparison of the results (synthetic vs. natural) (N. Chumerin), (iii) learning receptive fields (RFs) from natural scenes (F. Beuth), (iv) decision on Vergence Control, (v) vergence control should be decoupled from the robotic arm control visual system; (4) Introduction of temporal component into population code detectors in order to enrich scene representation.

Castellon de la Plana, Spain 27/09-07/10/2010

K.U.Leuven: Nikolay Chumerin

WWU: Frederik Beuth (until 01/10)

UG (27-28/09): Agostino Gibaldi, Andrea Canessa, Silvio Sabatini

UJI: Marco Antonelli, Eris Chinellato.

Discussed topics: Integration of VVCA modules on UJI robotic platform according to Roadmap.

Decisions: Definition of interfaces between modules; demonstration setup; possible integration issues; implementation guidelines and schedule.

Documentation: Meeting notes sent on 07/10/2010.

Castellon de la Plana, Spain 04/02/2011

UNIBO: Patrizia Fattori, Claudio Galletti

WWU: Katharina Havermann, Markus Lappe, Svenja Wulff

UJI: Eris Chinellato

Discussed topics: (1) Saccadic adaptation on the simulator. (2) Attentional effects in the shaping of eye position dependency of saccadic adaptation

Decisions: Use saccadic adaptation experiment as validation for robotic system.

Castellon de la Plana, Spain 3-4/02/2011

UG: Agostino Gibaldi, Silvio Sabatini

WWU: Frederik Beuth, Fred Hamker

UJI: Marco Antonelli, Eris Chinellato

K.U.Leuven: Nikolay Chumerin, Karl Pauwels.

Discussed topics: Integration of VVCA modules on UJI robotic platform according to Roadmap: experimental set-up and workspace definition.

The following visits took place during the third reporting period. Exchange of persons for a short or longer period was crucial for a direct transfer of the results among partners and an efficient way for integration.

- Markus Lappe (WWU) visited UNIBO on 01/04/2010 for the analysis of data on attentional modulations in medial parieto-occipital cortex, and on 11/05/2010 for the preparation of the manuscript on attentional modulations (Galletti *et al.*, 2010 Plos One).
- Eris Chinellato (UJI) visited UNIBO on 24-25/03/2010 for discussion on the data published later in (Bosco *et al.*, 2010) and in (Chinellato *et al.*, 2010) and on the utilization of these data in models to be implemented in the robot.
- Silvio Sabatini (UG) visited UNIBO on 11/06/2010 to discuss the analysis of the data relative to fixation in depth in medial PPC.
- Nickolay Chumering (K.U.Leuven) and Frederik Beuth (WWU) visited UG on 14-20 Mar 2010 for WP1-WP2-WP3 integration.
- Nikolay Chumerin (K.U.Leuven) visited UJI from 27/09-08/10/2010 to perform the integration of vergence control in robotic set-up at UJI in Castellon.
- Frederik Beuth (WWU) visited UJI from 27/09-01/10/2010 to perform the integration of the Object Recognition module in robotic set-up at UJI in Castellon.
- Svenja Wulff (WWU) visited UNIBO on 26/04-13/05, 31/05-04/06, 14/11-03/12, 08-17/12 2010 to set up the experiments regarding Task 5.3 and to collect and analyze the data.
- Anna Stenzel (WWU) visited UJI from 31/01 to 22/02 2011 to conduct the human-robot interaction studies for Task 5.4.

5.2 Dissemination and use of the knowledge

Project web-site

The EYESHOTS web-site is continuously updated and can be viewed at <http://www.eyeshots.it>
A written description of this in this report appears obsolete and is omitted here.

Data taken from Google Analytics revealed the following statistics:

- The project website had in the third period about 250 pageviews per month
- Visitors were from different Countries in the world (see Fig.61)

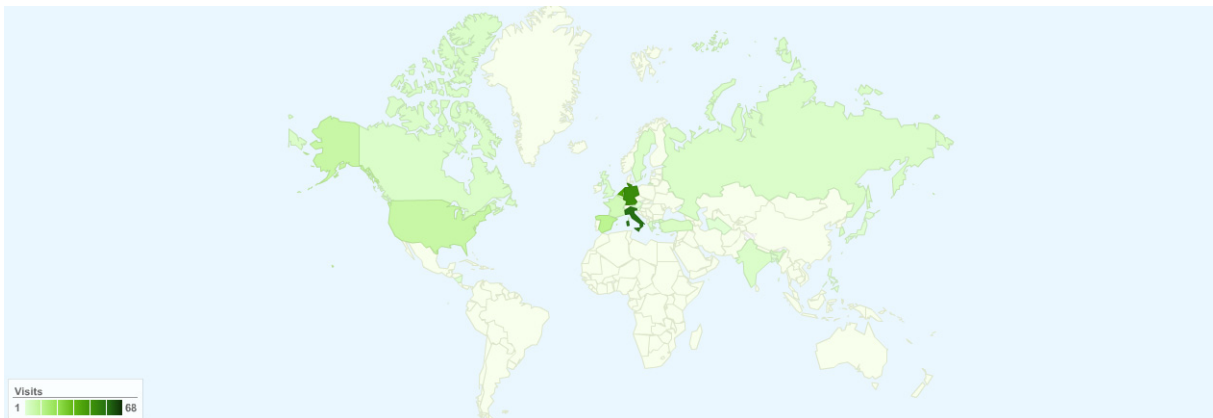


Figure 61: Geographical distribution of the visitors of the project's website.

- Visitors found the website from referring sites, search engines, or directly, with an approximately equal percentage (see Fig. 62)

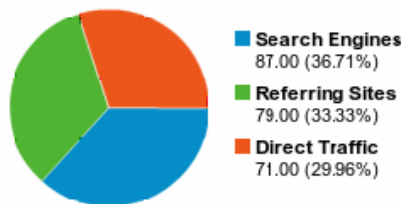


Figure 62: Distribution of the visit occurrence.

- The most visited pages were: the Homepage, Research News, Information about the Consortium, Publication.

List of publications⁴

In the third reporting period (months 25-36) a total of 16 journal papers have been published or accepted for publication (6 of them coauthored by different partners), and 17 conference contributions. Seven papers are currently under revision to peer reviewed journals. Twelve journal papers are in preparation (6 of them coauthored by different partners).

As the whole, since the beginning of the EYESHOTS project, the research activities conducted by the Consortium yield to 27 published journal papers and 39 conference contributions. 26% of all journal publications are with authors from different partners of EYESHOTS indicating that the consortium is working in a very cooperative way.

Journal papers [J] (the → symbol marks joint publications)

- [J1] Chessa M., Solari F., Sabatini S.P. (2011) Virtual Reality to Simulate Visual Tasks for Robotic Systems. In Virtual Reality, Jae-Jin Kim (ed.), InTech, ISBN/ISSN: 978-953-307-518-1.
- [J2] → Chinellato, E., Grzyb, B.J., Marzocchi, N., Bosco, A., Fattori, P. & del Pobil, A.P. (2011a) The Dorso-medial visual stream: From neural activation to sensorimotor interaction. *Neurocomputing*, 74(8):1203-1212.
- [J3] Chinellato E., Antonelli, M., Grzyb, B.J. del Pobil, A.P. (2011b) Implicit sensorimotor mapping of the peripersonal space by gazing and reaching. *IEEE Transactions on Autonomous Mental Development*, 3(1):43-53.
- [J4] Gamberini M, Galletti C, Bosco A, Breveglieri R, Fattori P (2011) Is the medial posterior-parietal area V6A a single functional area? *J Neurosci*. 31: 5145-5157.
- [J5] Hamker, F.H., Zirnsak, M., Ziesche, A., Lappe, M. (2011) Computational models of spatial updating in peri-saccadic perception. *Philos. Transac. Royal. Soc. Lond., Phil. Trans. R. Soc. B*, 366:554-571.
- [J6] Solari F., Chessa M., Sabatini S.P. (2011) Design strategies for direct multiscale and multi-orientation visual processing in the log-polar domain. *Pattern Recognition Letters*, accepted with major revisions.
- [J7] Zimmermann, E. Lappe, M. (2011) Eye position effects in oculomotor plasticity and visual localization. *J. Neurosci*. In press.
- [J8] → Bosco A., Breveglieri R., Chinellato E., Galletti C., Fattori P. (2010) Reaching activity in the medial posterior parietal cortex of monkeys is modulated by visual feedback *J. Neurosci*. 30:14773-85.
- [J9] → Chumerin, N., Gibaldi, A., Sabatini, S.P., Van Hulle, M.M. (2010) Learning eye vergence control from a distributed disparity representation. *International Journal of Neural Systems*, 20(4), 267-278. <http://dx.doi.org/10.1142/S0129065710002425>
- [J10] → Galletti C., Breveglieri R., Lappe M., Bosco A., Ciavarro M., Fattori P. (2010) Covert shift of attention modulates the ongoing neural activity in a reaching area of the macaque dorsomedial visual stream. *PLoS ONE* 5(11): e15078. doi:10.1371/journal.pone.0015078.
- [J11] Havermann, K., Lappe, M. (2010) The influence of the consistency of post-saccadic visual error on saccadic adaptation. *J Neurophysiol*, 103(6), 3302–3310.
- [J12] → Pauwels, K., Krüger, N., Lappe, M., Wörgötter, F., and Van Hulle, M.M. (2010). A cortical architecture on parallel hardware for motion processing in real-time. *Journal of Vision*, 10(10):18, 1-21. <http://www.journalofvision.org/content/10/10/18>
- [J13] Schnier, F., Zimmermann, E., Lappe, M. (2010) Adaptation and mislocalization fields for saccadic outward adaptation in humans. *Journal of Eye Movement Research*, 3(4), 1-18.
- [J14] Vitay, J., Hamker, F.H. (2010) A computational model of the influence of basal ganglia on memory retrieval in rewarded visual memory tasks. *Frontiers in Computational Neuroscience*. Volume 4, Article 13.
- [J15] Zimmermann, E., Lappe, M. Motor Signals In Visual Localization. (2010) *Journal of Vision*, 10(6), 2. PMID: 20884551.

⁴ new publications or papers that changed their status in the reporting period.

- [J16] Zirnsak, M, Hamker, F.H. Attention alters feature space in motion perception. (2010) *J Neuroscience*, 30(20):6882-6890.
- [J17] Zirnsak, M., Lappe, M., Hamker, F.H. (2010) The spatial distribution of receptive field changes in a model of peri-saccadic perception: predictive remapping and shifts towards the saccade target. *Vision Research*, 50:1328-1337.
- [J18] Canessa A., Sabatini S.P., Solari F. (2011a) Visuo-motor constraints in binocular eye coordination: optimization theories revisited. Submitted.
- [J19] → Hadjidimitrakis K, Breveglieri R, Placenti G, Bosco A, Sabatini S.P, Galletti C, and Fattori P (2011) Fix Your Eyes Where You Can Reach: Neurons in the Macaque Medial Parietal Cortex Prefer Gaze Positions in Peripersonal Space. Submitted
- [J20] Havermann, K., Zimmermann, E., Lappe, M. (2011) Eye position effects in saccadic adaptation. *J. Neurophysiol.* Under revision.
- [J21] Schnier, F., Lappe, M. (2011) Differences in inter-saccadic adaptation transfer between inward and outward adaptation. *J. Neurophysiol.* Under revision.
- [J22] Volcic, R., Lappe, M. (2011) Potentially purposeful actions divert overt attention. *Attention, Perception & Psychophysics*. Under revision.
- [J23] Schroll, H. Vitay, J., Hamker, F.H. (2011) Working memory and response selection: A computational account of interactions among cortico-basal ganglio-thalamic loops, Submitted to *Journal of Cognitive Neuroscience*
- [J24] Sabatini, S.P., Solari, F., Canessa, A., Chessa, M., Gibaldi, A. (2011a) Early perception-action cycles in binocular vision: Visuomotor paradigms and cortical-like architectures. In “Developing and Applying Biologically-Inspired Vision Systems: Interdisciplinary Concepts”, Marc Pomplun & Junichi Suzuki (Eds.), IGI Global. Submitted

Conference contributions [C] (the → symbol marks joint publications)

- [C1] Gibaldi A., Canessa A., Chessa M., Solari F., Sabatini S.P. (2011a) A cortical model for vergence control: advantages of space-variant geometry of the cortical domain. *Cosyne11*, Salt Lake City, Utah, February 24 - March 1, 2011.
- [C2] Gibaldi A., Canessa A., Chessa M., Sabatini S.P., Solari F. Read-out rules for short-latency disparity-vergence responses from populations of binocular energy units: the effect of vertical disparities. 33th European Conference on Visual Perception (ECVP'10), Lausanne, 22-26 August, 2010.
- [C3] Hadjidimitrakis K., Breveglieri R., Bosco A., Placenti G., Bertozzi F., Fattori P., Galletti C. (2010) Fixation in depth reveals a preference for reachable space in the macaque medial parieto-occipital cortex. Program No. 75.7. 2010 Neuroscience Meeting Planner. San Diego, CA: Society for Neuroscience, 2010. Online.
- [C4] Gamberini M., Breveglieri R., Bosco A., Fattori P., Galletti C. (2010) Functional profiles within the medial posterior parietal area V6A. Program No. 75.6. 2010 Neuroscience Meeting Planner. San Diego, CA: Society for Neuroscience, 2010. Online.
- [C5] Passarelli L., Gamberini M., Bakola S., Burman K. J., Fattori P., Rosa M. G., Galletti C. (2010) Cortico-cortical connections of the parietal area V6Av in the macaque monkey. Program No. 373.21. 2010 Neuroscience Meeting Planner. San Diego, CA: Society for Neuroscience, 2010. Online.
- [C6] → Havermann, K., Zimmermann, E., Fattori, P. & Lappe, M., (2010) Eye position effects in the adaptation of reactive saccades. *Neuroscience Meeting*, San Diego, CA. USA, 2010.
- [C7] Volcic, R., Lappe, M., Sudden hand movements enhance gaze cueing. (2010) *Vision Science Society Meeting (VSS)*, Naples, Florida, USA
- [C8] → Bosco A, Breveglieri R, Chinellato E, Galletti C, Fattori P (2011) Visual feedback influences the reaching activity in parietal area V6A of the macaque WINTER SCHOOL, FENS 2011, Austria
- [C9] Antonelli M., Chinellato E., del Pobil A.P. (2011) Implicit mapping of the peripersonal space of a humanoid robot. *IEEE Symposium Series on Computational Intelligence - SSCI 2011*, Paris, April 2011.

- [C10] Chinellato E., Felip J., Grzyb B.J., del Pobil A.P. (2011c) Hierarchical object recognition inspired by primate brain mechanisms. IEEE Symposium Series on Computational Intelligence - SSCI 2011, Paris, April 2011.
- [C11] → Martinez E., del Pobil A.P., Chessa M., Solari F., Sabatini S.P. (2011) An Integrated Virtual Environment for Visual-based Reaching, The ACM Intl. Conf. on Ubiquitous Information Management and Communication, Seoul, 2011.
- [C12] Beuth, F, Wiltschut, J, Hamker, F. H. (2010) Attentive Stereoscopic Object Recognition. In: Machine Learning reports 04/2010, AG Computational Intelligence, University of Leipzig. p. 41-48.
- [C13] Chessa M., Maiello G., Silvestro C., Canessa A., Gibaldi A., Sabatini S.P., Solari F. (2011) Assessment of the visuo-motor coordination in the peripersonal space through augmented reality environments. Submitted to 34th European Conference on Visual Perception (ECVP'11), Toulouse, 28th August – 1st September 2011.
- [C14] Gibaldi A., Canessa A., Chessa M., Solari F., Sabatini S.P. (2011b) Adaptive read-out mechanisms of disparity population codes: reaching the theoretical disparity-size correlation limit with minimal binocular resources. Submitted to 34th European Conference on Visual Perception (ECVP'11), Toulouse, 28th August – 1st September 2011.
- [C15] Sabatini S.P., Canessa A., Gibaldi A., Chessa M., Solari F. (2011b) Statistical disparity patterns experienced by an active observer in the peripersonal space. Submitted to 34th European Conference on Visual Perception (ECVP'11), Toulouse, 28th August – 1st September 2011.
- [C16] Canessa A., Chessa M., Gibaldi A., Solari F., Sabatini S.P. (2011b) Empirical horopter explained by the statistics of disparity patterns in natural space. Submitted to 34th European Conference on Visual Perception (ECVP'11), Toulouse, 28th August – 1st September 2011.
- [C17] Cannata G., Trabucco A. Coordinated Tendon Control of a Bioinspired Robot Eye, Submitted to IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2011).

Abstracts of presentations to national meetings [N]

- [N1] Bosco A., Breveglieri R., Chinellato E., Galletti C., Fattori P. (2010). Visual feedback about reaching actions influences neural activity in parietal area V6A. Societa' italiana di Fisiologia, Varese, Settembre 2010.

In preparation:

- Chessa M., Sabatini S.P. and Solari F. *Neuronal paradigms for flexible and robust phase-based vision algorithms: applications to stereo and motion robot perception*
- Schnier, F., Zimmermann, E., Lappe, M. *Adaptation and mislocalization fields for saccadic outward adaptation in humans.*
- → Breveglieri R., Hadjimitsakis K., Bosco A., Sabatini S.P., Galletti C., Fattori P. *Balanced sampling of visual fragments in the reachable space by parieto-occipital neurons.*
- Martinez E., Antonelli M., Chinellato E., del Pobil A.P. *Self-Learning of Visuomotor Knowledge in Unstructured Environments*
- → Antonelli et al. *Paper on the full integrated robotic system(UJI+UG+K.U.Leuven+WWU)*
- → Chinellato et al. *Paper on saccadic adaptation experiments with model and robot (UJI+WWU)*
- → Chumerin N., Beuth F., Gibaldi A., Canessa A., Van Hulle M., Sabatini S.P., Hamker F.H. *Paper on the integrated model for Vergence-Version Control with Attention effect, VVCA*
- Havermann, K., Volcic, R., Lappe, M. *Saccadic adaptation to moving stimuli.*
- Volcic, R., Lappe, M. *Gaze behavior in cooperative action.*
- → Wulff, S., Havermann, K., Lappe, M., Bosco, A., Galletti, C., Fattori, P. *Eye position effects in saccadic adaptation in the macaque.*

- Cannata G., Trabucco A. *Paper for the IEEE/ASME Transactions on Mechatronics, Focused Section on Bio-Inspired Mechatronics*
- → Stenzel, A., Chinellato E., Tirado Bou, M.A., del Pobil, A.P., Lappe, M., and Liepelt. R. *How humanoid robots become human-like partners in joint action*. In preparation.

Other dissemination activities

- Claudio Galletti and Patrizia Fattori “Reaching and grasping activities in the medial posterior parietal cortex of the primate brain” - Plenary lecture at the *International Conference on Parietal Lobe Function*, European Science Foundation Artis Zoo, Amsterdam, The Netherlands, 20-21/09/2010.
- Patrizia Fattori “Coding for reaching and grasping in the monkey medial posterior parietal cortex: Refining the role of the dorsal visual stream in action” - Invited lecture at the INSERM, Directeur Dr. Denis Pelisson unit 864, Lyon, 24/02/2011.
- Silvio P. Sabatini “Early Perception-Action Cycles in Binocular Robot Vision: Visuomotor Paradigms and Cortical-like Architectures”. Invited talk at the *11th European Conference on Computer Vision, Workshop on "Vision for Cognitive Tasks"*, Hersonissos, Heraklion, Crete, Grece, 10 September, 2010.
- Silvio P. Sabatini “Early perception-action cycles in binocular vision: Cortical architectures for 3D dynamic measurements in the peripersonal space” – Invited talk at the Centre de Recherche Cerveau & Cognition - CNRS-Université Paul Sabatier Toulouse 3, 28 May 2010.
- Giorgio Cannata, “Models for Bio-Inspired Robot Eyes”. Invited Talk at the Workshop on “Predictive models in humanoid gaze control and locomotion” at IEEE 2010 Robotics: Science and Systems Conference, Saragozza, Spain, June 2010.

List of exploitable results

- Simulink based toolbox for dynamic simulation of bionspired robot eye.
- Drawing and CAD model for implementation of tendon driven robot eyes replicas.
- Optimized software library to obtain a distributed representation of binocular disparity based on a population of binocular complex cells.
- C++/OpenGL simulator of an *active vision system* for the active exploration of 3D environments, the rendering of stereo image pairs, and the generation of ground truth data.
- Range data sets, benchmark images and sequences (www.pspc.dibe.unige.it/Research/vr.html).
- A software library to perform the log-polar transformation between the retinal and the cortical domains.

6 Explanation of the use of the resources

6.1 Justification of major cost items and resources

The following tables list the major cost items (one table by participant).

| TABLE 6.1a PERSONNEL, SUBCONTRACTING AND OTHER MAJOR DIRECT COST ITEMS FOR BENEFICIARY 1 (UG) FOR THE PERIOD | | | |
|---|------------------------|---------|---|
| Work Package | Item description | Amount | Explanations |
| All | Personnel costs | 123.738 | Costs of the worked person months for the permanent staff working on the project and of two post-doctoral students (Manuela Chessa and Andrea Trabucco). Agostino Gibaldi and Andrea Canessa (PhD students) also worked on the project, but they have their own fundings. |
| WP1, WP2, WP4, WP5, WP6, WP7, WP8 | Major travel costs | 2.362 | Major travel costs include: - Participation to 2nd Review Meeting in Leuven, B, 17-20 May 2010 - S.P.Sabatini (€ 1.041,65) - Participation to a Technical meeting at University of Muenster, and visit to Dr. M. Spratling (King's College London) to present project's results and perspectives (Muenster, D - London, UK, 14-18 Dec. 2010) - S.P.Sabatini (€ 1.320,60). |
| WP1, WP2, WP4, WP5, WP6, WP7, WP8 | Other travel costs | 5.771 | Travel costs also include: - Participation to 2nd Review Meeting Leuven, B, 17-20 May 2010 - A. Gibaldi, A. Canessa, G. Cannata, A. Trabucco - Participation to Seminar to CNRS Toulouse, F, 27-28 May 2010 - S.P. Sabatini - Participation to Technical meeting Bologna, IT, 11 June 2010 - S.P. Sabatini - Participation to Conference Robotics: Science and Systems Zaragoza, E, 26-28 June 2010 - G. Cannata - Participation to 2nd National Conference of Bioengineering Torino, IT, 8-10 July 2010 - S.Sabatini, A. Gibaldi, A. Canessa - Participation to Conference ECCV 210 Heraklion, GR, 9-12 Sept. 2010 - S.P. Sabatini - Participation to M30 meeting Castellon, E, 26-28 Sept. 2010 - S.P.Sabatini, A. Gibaldi, A. Canessa - Participation to M36 meeting Castellon, E, 2-4 Febr. 2011 - S.P.Sabatini, A. Gibaldi, G. Cannata - Purchase of flight tickets for the 3rd Review Meeting Castellon E, 18-21 May 2011 - S.P. Sabatini, A. Gibaldi, A. Canessa. |
| WP1, WP2, WP3 | Major equipment costs | 6.000 | The main equipment purchased for the project is a 3D laser scanner (Konica Minolta Vivid 910) - Total cost: € 30,000.00, depreciation for the period € 6.000. |
| WP1, WP2, WP3 | Other equipment cost | 4.240 | Other minor pieces of equipment, such as PC, monitor, multifunction printer, projector, telecamera have also been imputed to the project, according to their use. |
| WP6 | Subcontracting | 5.075 | Certificate on the financial statement (enclosed with the cost statements of the 2 nd reporting period) - Studio Tributario Associato Tarigo & Saveri. |
| WP1, WP2, WP6, WP7, WP8 | Remaining direct costs | 11.895 | Major consumable costs include: - n. 8 linear actuators 1,03N + n. 8 driving gears int CAN open (€ 5.854,98). Other minor costs for conferences, membership fees, books, posters, publication etc. have also been imputed to the project, according to their use. |
| Total direct cost | | 159.081 | |

**TABLE 6.1b PERSONNEL, SUBCONTRACTING AND OTHER MAJOR DIRECT COST ITEMS
FOR BENEFICIARY 2 (WWU) FOR THE PERIOD**

| Work Package | Item description | Amount | Explanations |
|--|------------------------|---------|--|
| WP2, WP3, WP4,WP5. WP6, WP7, WP8 | Personnel costs | 143.558 | Costs of the worked person months for the permanent staff working on the project and of seven post-doctoral students (Jan Wiltshut, Mark-Andre Voss, Svenja Wulff, Anna Stenzel). R. Volcic, Dirk Calow and J. Vitay (PhD) also worked on the project, but they have their own fundings. |
| WP2, WP3, WP4,WP5. WP6, WP7, WP8 | Major travel costs | 11.797 | Major travel costs include: - Participation to conference VSS'10 Naples, USA 06-14 May 2010 - M. Lappe, R. Volcic (€ 4.295,48) - Research Bologna, Italy 03-13 May 2010 - S. Wulff, (€ 1.386,99) - Research Bologna, Italy 14 Nov. - 03 Dec. 2010 - S. Wulff, (€ 1.581,46) - Participation to 2 nd review meeting Leuven, 17-20 May 2010 - M. Lappe, R. Volcic, F. Hamker, (€ 1.343,55) - Participation to M30 meeting Castellon, 25-28 Sept. 2010, F. Hamker, F. Beuth, (€ 1.256,38) - Participation to M36 meeting Castellon, 02-06 Feb. 2011, M. Lappe, S. Wulff, R. Liepelt, (€ 1.933,28) |
| WP2, WP3, WP4,WP5. WP6, WP7, WP8 | Other travel costs | 3.750 | Travel costs also include: - Participation to meeting Venice/Bologna, 22- 25 Mar. 2010 - M. Lappe, (€ 769,00) - Participation to research Bologna, 26-30 Apr. 2010 - S. Wulff, (€ 747,17) - Participation to research Bologna 31 May-04 Jun. 2010 - S. Wulff, (€ 546,98) - Participation to research Bologna 08-17 Dec. 2010 S. Wulff, (€ 783,18) - Participation to Conference BCCN Berlin, 27- 30 Sept. 2010 J. Wiltshut, (€ 219,05) - Research Genoa, 14-19 Mar. 2010 F. Beuth, (€ 684,63) |
| WP3, WP5 | Major equipment costs | 8.100 | The main equipment purchased for the project are: - Eyetracker SR Research - Total cost: € 28.000,00, depreciation for the period € 5.600 - Eyetracker Arrington - Total cost: € 7.501,34 depreciation for the period € 2.500 |
| WP3, WP5 | Other equipment cost | 6.502 | Other minor pieces of equipment, such as Computer Bense Systeme, Camcorder Mitfactory, Computer IVV have also been imputed to the project, according to their use. |
| WP6 | Subcontracting | 1.200 | Certificate on the financial statement - VDI Technologiezentrum |
| WP3, WP 5 | Remaining direct costs | 5.787 | Major consumable costs include: - Experiment set up (€ 3.362,16) - Personaltrial, (€ 800,00) - Computer equipment, (1.625,14) |
| Total direct cost | | 180.694 | |

TABLE 6.1c PERSONNEL, SUBCONTRACTING AND OTHER MAJOR DIRECT COST ITEMS FOR BENEFICIARY 3 (UNIBO) FOR THE PERIOD

| Work Package | Item description | Amount | Explanations |
|--------------------|------------------------|--------|---|
| WP4, WP5, WP7, WP8 | Personnel costs | 45.498 | Personnel costs necessary for the realisation of the 3rd reporting period project activities include: 10,10 person months, of which 6,10 of permanent personnel and 4 of temporary personnel devoted to the project. 2,43 PM have been used for WP4, 6,7 for WP5, 0,50 for WP7 and 0,47 for WP8, as reported in the progress report. |
| WP4, WP5, WP7, WP8 | Major travel costs | 3.482 | Major travel cost include: - Participation to the 2nd review meeting, in Leuven by: Galletti Claudio and Fattori Patrizia (€ 1.386,85) - Participation to the 40th Annual Meeting of neuroscience held on November 2011 in San Diego (USA) by: Gamberini Michela and Passarelli Lauretta (€ 1.080,85) - Participation to the M36 Project meeting held in Castellon (Valencia) in February 2011 by Fattori Patrizia and Galletti Claudio (€ 1.014,07). |
| WP4, WP5, WP7, WP8 | Other travel costs | 1.739 | Travels costs also include: - Participation to the International Conference on Parietal Lobe Function in Amsterdam by Fattori Patrizia (€ 768,84) - Participation to the M30 Project Meeting of September 2010 held in Castellon (Valencia) by Patrizia Fattori (€ 409,68) - Participation to the 61st National Congress of Physiology in Varese by Bosco Annalisa (€ 561,2). |
| WP5 | Major equipment costs | 7.383 | Major equipment costs include: - Primate chair used in electrophysiological experiments (historical cost 8.314,61 €, reported in the period 1.662,92 €) - ETL-200 primate eye tracking lab (historical cost 17.160,26 €, reported in the period 5.720,08 €). The reported equipment costs take into consideration the depreciation rules applicable by the beneficiary and the specific use for the project. |
| WP5 | Other equipment cost | 3.295 | Other minor pieces of equipment (Electronic precision balance for histology; Stereomicroscope used for neuroanatomy; Mechanical device used for injection, Laptop used for analysis of electrophysiological data, Electrode impedance test device con micro electrode tip cleaner, PC Advanced, Digital video camera, Oscilloscope, Elaboratore MacBook Better, Digital photo camera Power Shot) have also been imputed to the project, according to their use. |
| | Subcontracting | | None |
| WP5, WP7, WP8 | Remaining direct costs | 7.275 | Major consumable costs include: - Lab material for ETS Eye Tracker systems (€ 739,95) - Lab material (€ 2.869,76) - Costs for publications on Journal of Neuroscience (€ 1.447,11) Other minor costs for lab materials, hosting expenses and publications have also been imputed to the project, according to their use. |
| Total direct cost | | 68.672 | |

TABLE 6.1d PERSONNEL, SUBCONTRACTING AND OTHER MAJOR DIRECT COST ITEMS FOR BENEFICIARY 4 (UJI) FOR THE PERIOD

| Work Package | Item description | Amount | Explanations |
|-------------------------|------------------------|---------|--|
| WP1, WP4, WP5, WP7, WP8 | Personnel costs | 107.150 | Costs of the worked person months for the permanent staff working on the project (€ 26.731,37 - 5,81 PM) and of a Doctor, a PhD student, a graduate student and a technician (€ 80.418,63 - 18,8 PM). Beata Joanna Grzyb also intervened sporadically on the work, but no person months have been reported. The real total amount of personnel costs is € 114.760,01 (€ 7.610,01 are paid by other funds). |
| WP4, WP7 | Major travel costs | 6.212 | Major travel costs include: - Research visit at Bologna University to carry out work related to project Eyeshots - Bologna, Italy 6 Mar-7 Apr 2010 - E. Chinellato (€ 1.138,72). The stay was necessary for achieving a tighter integration of UJI model and robot implementation with the experiments and concepts deriving from partners UNIBO and WWU. - Eyeshots 2 nd review meeting Leuven, Belgium 17-20 May 2010 - A. Pobil, B.Grzyb (€ 1.638,86) - Presentation of a project related article at the "5th ACM International Conference on Ubiquitous Information Management and Communication" Seoul, South Korea 20-23 Feb 2011 - A. Pobil (€ 3.434,78). |
| WP8 | Other travel costs | 644 | Travel costs also include: - Participation at conference "Euron Europ Annual Meeting" San Sebastián, Spain 10-12 Mar 2010 - E. Chinellato. |
| WP4 | Major equipment costs | 13.280 | Major equipment costs include: - a robotic head (TO40 Human-like stereovision system purchased at Robosoft on 31-Jul-09) - Total cost: € 34.999,1 - depreciation for the period (12 months) € 8.662,28 - a team of "Nao Academic Edition v3plus Humanoid Robots" (Aldebaran Robotics) - Total cost: € 60.617,64 - depreciation for the period (6.6 months) € 4.617,64. |
| | Other equipment cost | | None |
| | Subcontracting | | None |
| WP4 | Remaining direct costs | 10.155 | Major consumable costs include (all the expenditures incurred for the purchase of required components for the UJI Humanoid Robot Torso, and for their integration in order to guarantee the performance of the final EYESHOTS demonstrator): - Brushless motoreductors and spur gearheads 1:1200 with no-load speed 4400 rpm and stall torque 84.3 mnm (€ 3.184) - Pulse-width modulation servo amplifiers with IxR compensation, digital encoder control and tacho control, 95% efficiency with MOSFET technology (€ 2.036) - Multi-axis servo and stepper motion control PCI card, 8 axes of combined servo and stepper control: 4 axes of analog (servo) command, plus 4 axes of pulse (stepper or servo) command, with 8 encoders and trapezoidal, S-curve and parabolic profiles (€ 1.836) - Servo amplifier for control unit of Mitsubishi PA10 robot, for fast reacting motors to keep the prescribed motor speed constant and independent of load changes (€ 2.950) Other minor costs for transportation of guests at the M36 Eyeshots Annual Meeting held in Castellon and the costs of sending the signed Form C's of the 2 nd reporting period. |
| Total direct cost | | 137.441 | |

**TABLE 6.1e PERSONNEL, SUBCONTRACTING AND OTHER MAJOR DIRECT COST ITEMS
FOR BENEFICIARY 5 (K.U. Leuven) FOR THE PERIOD**

| Work Package | Item description | Amount | Explanations |
|----------------------------|------------------------|---------|---|
| WP2, WP3, WP6, WP7, WP8 | Personnel costs | 167.484 | Costs of the person months of the permanent staff working on the project and for the hired personnel working on the project. Permanent Staff: Marc Van Hulle, 3,4 PM € 32.805,89. Hired Personnel: Nikolay Chemerin, 8 PM € 37.431,29; Patrick De Mazière, 1,50 PM € 10.202,47; Filip Deleus, 0,50 PM € 2.467,65; Nikolay Manyakow, 2 PM € 9.992,85; Karl Pauwels, 12 PM € 74.584,00. |
| WP2, WP3, WP6, WP7, WP8 | Major travel costs | 1.366 | Major travel costs include: - Participation to M30 periodic meeting Castellon, Spain, 27 Sept. 2010 - N. Chumerin, K. Pauwels, M. Van Hulle (€ 1.366,34). |
| WP2, WP3, WP6, WP7, WP8 | Other travel costs | 2.502 | Travel costs also include: - Participation to IDEAL 2010 Conference, Paisley, Scotland, 1-3 Sept 2010 - M. Van Hulle - Participation to Technical Meeting, Castellon, Spain, 27 Sept-8 Oct 2010 - N. Chumerin - Participation to M36 periodic meeting Castellon, Spain, 03 Febr 2011 - N. Chumerin, K. Pauwels, M. Van Hulle. |
| | Major equipment costs | | None |
| | Other equipment cost | | None |
| WP6 | Subcontracting | 950 | Audit by Ernst & Young |
| WP2, WP3, WP6, WP7, WP8 | Remaining direct costs | 5.552 | Major consumable costs include: - Faculty Club, Second Review Meeting, Leuven-Belgium, 18-20 May 2010 (€ 1.035) - Alma, Second Review Meeting, Leuven-Belgium, 18-20 May 2010 (€ 1.419) - Lunches and dinners for the 2 nd Review Meeting in Leuven (attended by Project Officer, 2 reviewers, and Eyeshots team members): Restaurant Land aan de Overkant, Leuven; Voltaire Brasserie, Heverlee; Traiteur René & R, Leuven (€ 1.344) - Association Research VI (€ 1.399) Other minor cost for Society for Neuroscience, color pictures, paper filters, brika filter, etc. have also been imputed to the project, according to their use. |
| Total direct cost | | 177.854 | |

6.2 Budgeted versus Actual Costs

Tabular overview of budgeted costs and actual costs, by beneficiary and by major cost item including personnel. The budgeted costs are taken from the Annex I.

| Cost Budget Follow-up Table | | | | | | | | | | |
|-----------------------------|--|---------------------|--------------------|----------------|------------------|--------------|------------------|------------------|------------------------|--------------------|
| Contract N°: 217077 | | Acronym: EYESHOTS | | | | | | Date: | | |
| BENEFICIARY | TYPE of EXPENDITURE (as defined by participants) | BUDGET e | ACTUAL COSTS (EUR) | | | | | Pct. spent | Remaining Budget (EUR) | |
| | | | Period 1 | Adjustment | Period 2 | Adjustment | Period 3 | Total | | |
| | | | a1 | 1st Period | b1 | 2nd Period | c1 | e1 | a1+b1+c1/e | e-e1 |
| Part. 1 | Total Person-month | 117 | 38,44 | 0,00 | 43,68 | 0,00 | 35,41 | 117,53 | 100% | -0,53 |
| UG | Personnel costs | 414.029,88 | 169.310 | 5.844 | 167.877 | 676 | 123.738 | 467.445 | 113% | -53.415,12 |
| | Travel costs | 36.000,00 | 9.390 | 0 | 11.385 | 0 | 8.133 | 28.908 | 80% | 7.092,00 |
| | Durable Equipment (Depreciation) | 33.930,28 | 4.005 | 0 | 9.792 | 0 | 10.240 | 24.037 | 71% | 9.893,28 |
| | Subcontracting/Audit | 1.863,38 | 0 | 0 | 0 | 0 | 5.075 | 5.075 | 272% | -3.211,62 |
| | Other costs ('the rest') | 39.788,89 | 4.456 | 0 | 8.481 | 0 | 11.895 | 24.832 | 62% | 14.956,89 |
| | Overheads | 314.249,43 | 112.296 | 3.506 | 118.521 | 405 | 92.402 | 327.130 | 104% | -12.880,57 |
| | Total Costs | 839.861,86 | 299.457 | 9.350 | 316.056 | 1.081 | 251.483 | 877.427 | 104% | -37.565,14 |
| Part. 2 | Total Person-month | 103,00 | 32,00 | 0,00 | 40,00 | 0,00 | 31,00 | 103,00 | 100% | 0,00 |
| WWU | Personnel costs | 453.200,00 | 143.409 | 0 | 178.049 | 0 | 143.558 | 465.016 | 103% | -11.816,00 |
| | Travel costs | 29.000,00 | 8.130 | 0 | 12.100 | 3.258 | 15.547 | 39.035 | 135% | -10.035,00 |
| | Durable Equipment (Depreciation) | 38.000,00 | 10.144 | 0 | 14.440 | 0 | 14.602 | 39.186 | 103% | -1.186,00 |
| | Subcontracting/Audit | 2.000,00 | 0 | 0 | 0 | 0 | 1.200 | 1.200 | 60% | 800,00 |
| | Other costs ('the rest') | 2.200,00 | 4.450 | -1.135 | 5.098 | 0 | 5.787 | 14.200 | 645% | -12.000,00 |
| | Overheads | 313.440,00 | 99.679 | -681 | 125.812 | 1.954 | 107.696 | 334.460 | 107% | -21.020,00 |
| | Total Costs | 837.840,00 | 265.812 | -1.816 | 335.499 | 5.212 | 288.390 | 893.097 | 107% | -55.257,00 |
| Part. 3 | Total Person-month | 96,00 | 28 | 0 | 59,00 | 0,00 | 10,10 | 97,10 | 101% | -1,10 |
| UNIBO | Personnel costs | 196.800,00 | 63.260 | 335 | 90.838 | 165 | 45.498 | 200.096 | 101% | -3.296,00 |
| | Travel costs | 26.360,00 | 2.392 | 0 | 14.268 | 0 | 5.221 | 21.881 | 83% | 4.479,00 |
| | Durable Equipment (Depreciation) | 26.000,00 | 18.015 | 0 | 15.070 | 0 | 10.678 | 43.763 | 168% | -17.763,00 |
| | Subcontracting/Audit | 0,00 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | 0,00 |
| | Other costs ('the rest') | 36.000,00 | 15.462 | 260 | 23.026 | 0 | 7.275 | 46.023 | 127% | -10.023,00 |
| | Overheads | 171.096,00 | 59.477 | 357 | 85.921 | 99 | 41.203 | 187.057 | 109% | -15.961,00 |
| | Total Costs | 456.256,00 | 158.606 | 952 | 229.123 | 264 | 109.875 | 498.820 | 109% | -42.564,00 |
| Part. 4 | Total Person-month | 52,00 | 15,66 | -1,79 | 17,07 | 0,00 | 24,61 | 55,55 | 110% | -3,55 |
| UJI | Personnel costs | 257.712,00 | 63.961 | 0 | 89.083 | 0 | 107.150 | 260.194 | 101% | -2.482,00 |
| | Travel costs | 27.000,00 | 9.086 | 0 | 4.876 | 0 | 6.856 | 20.818 | 77% | 6.182,00 |
| | Durable Equipment (Depreciation) | 20.000,00 | 0 | 0 | 5.031 | 0 | 13.280 | 18.311 | 92% | 1.689,00 |
| | Subcontracting/Audit | 2.979,00 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | 2.979,00 |
| | Other costs ('the rest') | 4.888,80 | 1.995 | 0 | 472 | 0 | 10.155 | 12.622 | 258% | -7.733,20 |
| | Overheads | 185.760,48 | 45.023 | 0 | 59.677 | 0 | 82.464 | 187.164 | 101% | -1.403,52 |
| | Total Costs | 498.340,28 | 120.065 | 0 | 159.139 | 0 | 219.905 | 499.109 | 100% | -768,72 |
| Part. 5 | Total Person-month | 47,50 | 4,00 | 0,00 | 19,00 | 0,00 | 27,40 | 50,40 | 106% | -2,90 |
| K.U. Leuven | Personnel costs | 309.552,00 | 23.936 | 0 | 108.844 | 0 | 167.484 | 300.264 | 97% | 9.288,00 |
| | Travel costs | 10.000,00 | 6.289 | -1.894 | 11.052 | 1.514 | 3.868 | 20.829 | 212% | -10.829,00 |
| | Durable Equipment (Depreciation) | 5.000,00 | 4.175 | 0 | 0 | 0 | 0 | 4.175 | 84% | 825,00 |
| | Subcontracting/Audit | 1.000,00 | 0 | 0 | 0 | 0 | 950 | 950 | 95% | 50,00 |
| | Other costs ('the rest') | 9.782,00 | 0 | 415 | 1.200 | 0 | 5.552 | 7.167 | 69% | 2.615,00 |
| | Overheads | 200.600,40 | 20.639 | -887 | 72.657 | 908 | 106.142 | 199.459 | 99% | 1.141,40 |
| | Total Costs | 535.934,40 | 55.039 | -2.366* | 193.753 | 2.422 | 283.996 | 532.844 | 99% | 3.090,40 |
| TOTAL | Total Person-month | 415,50 | 118,10 | -1,79 | 178,75 | 0,00 | 128,52 | 423,58 | 102% | -8,08 |
| | Personnel costs | 1.631.293,88 | 463.876 | 6.179 | 634.691 | 841 | 587.428 | 1.693.015 | 103% | -61.721,12 |
| | Travel costs | 128.360,00 | 35.287 | -1.894 | 53.681 | 4.772 | 39.625 | 131.471 | 100% | -3.111,00 |
| | Durable Equipment (Depreciation) | 122.930,28 | 36.339 | 0 | 44.333 | 0 | 48.800 | 129.472 | 105% | -6.541,72 |
| | Subcontracting/Audit | 7.842,38 | 0 | 0 | 0 | 0 | 7.225 | 7.225 | 92% | 617,38 |
| | Other costs ('the rest') | 92.659,69 | 26.363 | -460 | 38.277 | 0 | 40.664 | 104.844 | 114% | -12.184,31 |
| | Overheads | 1.185.146,31 | 337.114 | 2.295 | 462.588 | 3.366 | 429.907 | 1.235.270 | 104% | -50.123,69 |
| | Total Costs | 3.168.232,54 | 898.979 | 6.120 | 1.233.570 | 8.979 | 1.153.649 | 3.301.297 | 104% | -133.064,46 |

* The sum includes the adjustments on the 1st reporting period stated in the 2nd financial statement and the adjustments on the 1st reporting period stated in the current (i.e., 3rd) financial statement.

Notes:

(1) Table 6.2 includes a column “Adjust. P2” where the adjustments for the second reporting period are reported for each cost category. The detailed justifications are listed here below, for each partner:

UG: The adjustment concerns personnel costs (€ 676 + indirect costs) and specifically refers to the valorization of the hours spent on the project by permanent personnel in the first 2 months of 2010 with the correct 2010 personnel costs. By the time of the 2nd period reporting, we didn't have the updated hourly rates, therefore we used the one of 2009.

WWU: adjustment for travels (€ 3.258 + indirect costs), because the invoices for these costs will be booked after period 2 in their accounting system.

UNIBO: adjustment for personnel costs (€ 165 + indirect costs), which refers to the valorization of the hours spent on the project by permanent personnel in the first 2 months of 2010 with the correct 2010 personnel costs.

K.U.Leuven: adjustment for the travel costs of the M24 meeting in Milan (flight, hotel, and other transportation costs) plus some minor other costs (total € 1.514 + indirect costs). Since the expenses were made by credit card their costs have been booked after the 2nd reporting period.

(2) Table 6.2 includes also a column “Adjust. P1” where the adjustments for the first reporting period are reported for each cost category. Partner K.U.Leuven reported a negative amount of - € 1.894,16 corresponding to costs erroneously charged on the project.

(3) In general, the actual spending adheres to the budget spending plans (104%). The major deviations, occurring for some beneficiaries, relate to cost categories (such as ‘travel’ and ‘other cost’) for which a minor budget was initially planned. Such overspendings, though quite relevant with respect to the single cost categories, are far less than 1% of the planned total costs. In particular, in the third period a large number of meetings and cross-visits among partners occurred for collaborating activity on the integration of the final demonstrators and for the preparation of manuscripts for joint publications.

(4) The actual total PMs worked on the project exceeded the budget by about 8PMs, which is yet less than +2% of the planned total PMs.

Other specific notes for partners are added below to justify items where there was more than 10% deviation from the plan or where other important aspects needed justifications.

UG

The above-average overspending in personnel costs (113%) is due to an increase of the hourly rate of the personnel involved in the project. The fee of the Auditor that provided the CSF certificate was much higher than expected (compared to previous experience in FP6).

WWU

The deviation of 645% on item ‘Other costs’ corresponds to subject fees for the psychophysical experiments. The large percentage is mostly due to the small amount that was initially planned for ‘Other costs’.

There has been significantly larger expenses on Travel (135%) caused by the large number of meetings and research visits (some of which over more than a week) to other partners (UJI and UNIBO) for conducting collaborating activity on the integration of the final demonstrators, and for the preparation of co-authored publications.

UNIBO

Overspending for some cost categories (Equipment [168%] and Other costs [127%]) is caused by an underestimation of the expenses for purchasing the new laboratory equipment necessary for conducting the

experimental research as well as for the depreciation of the existing one, and for other laboratory material. Although the expenditures exceeded the planned budget, the use of the resources has been continuously monitored, following the scientific workflow of the project. In any case the direction of work has not changed with respect to what was declared in the Description of Work - Annex I. Overspending is partially compensated by an underspending on travel expenses.

UJI

Major other costs (258%) include all the expenses necessary for the components of the UJI Humanoid Robot Torso and their integration in order to guarantee the performance of the final EYESHOTS demonstrator.

The required components for integrating the final robot demonstrator were indeed not fully predictable at the beginning of the project.

The 10% increment of personnel costs was due to the increased amount of work for the integration after the reviewers' suggestions arising at the 2nd review meeting, mainly related to technical work regarding re-coding and adapting the partners' software modules. Communication has been sent to the Project's Coordinator on Nov 22nd 2010.

K.U.Leuven

The 212% overspending for Travel costs is motivated by many more meetings and research visits, some of which longer than a week, to work on the integration efforts among the partners of WP1,2,3 and WP4, and on the preparation of the final demonstrator.

In any case, the increase in travel budget is actually small in absolute terms, and well within the 10% (of the total budget) limit of the allowed shifts between expense categories.

Overspending in cost category Travel is balanced by an underspending in other cost categories: Durable equipment (84%) and Other costs (69%).

6.3 Planned versus Actual effort

Tabular overview of planned person-months and actual person-months, by beneficiary and by work package. The planned person-months are taken from the Annex I.

| Table 6.3: Person-Month Status Table* | | | | | | | | |
|--|--|--------------------------|---|------------------|------------|--------------|------------|-------------------|
| CONTRACT N°: 217077 | | | <div>Partner - Person-month per Workpackage</div> | | | | | |
| ACRONYM: EYESHOTS | | | | | | | | |
| PERIOD: 01.03.2010 - 28.02.2011 | | | TOTALS | Coord. UG | WWU | UNIBO | UJI | K.U.Leuven |
| | | | | | | | | |
| Workpackage 1: | Eye movements for exploration of the 3D space | Actual WP total: | 23,76 | 19,22 | 0,00 | 0,00 | 4,54 | 0,00 |
| | | Planned WP total: | 23,00 | 21,00 | 0,00 | 0,00 | 2,00 | 0,00 |
| Workpackage 2: | Active stereopsis | Actual WP total: | 22,55 | 4,55 | 0,00 | 0,00 | 0,00 | 18,00 |
| | | Planned WP total: | 24,00 | 7,00 | 0,00 | 0,00 | 0,00 | 17,00 |
| Workpackage 3: | Selecting and binding visual fragments | Actual WP total: | 21,00 | 1,00 | 17,00 | 0,00 | 0,00 | 3,00 |
| | | Planned WP total: | 21,00 | 1,00 | 17,00 | 0,00 | 0,00 | 3,00 |
| Workpackage 4: | Sensorimotor integration | Actual WP total: | 27,16 | 5,87 | 0,00 | 2,43 | 18,86 | 0,00 |
| | | Planned WP total: | 25,27 | 6,00 | 0,00 | 2,00 | 17,27 | 0,00 |
| Workpackage 5: | Human behavior and neural correlates of multisensory 3D representation | Actual WP total: | 21,20 | 0,50 | 13,00 | 6,70 | 1,00 | 0,00 |
| | | Planned WP total: | 20,50 | 0,50 | 13,00 | 6,00 | 1,00 | 0,00 |
| Workpackage 6: | Project coordination and management | Actual WP total: | 6,77 | 3,77 | 0,00 | 0,00 | 0,00 | 3,00 |
| | | Planned WP total: | 7,00 | 5,00 | 0,00 | 0,00 | 0,00 | 2,00 |
| Workpackage 7: | Knowledge Management, Dissemination, Synergies with other projects | Actual WP total: | 2,77 | 0,25 | 0,50 | 0,50 | 0,12 | 1,40 |
| | | Planned WP total: | 2,42 | 0,25 | 0,50 | 0,50 | 0,17 | 1,00 |
| Workpackage 8: | Training, Education and Mobility | Actual WP total: | 3,31 | 0,25 | 0,50 | 0,47 | 0,09 | 2,00 |
| | | Planned WP total: | 2,42 | 0,25 | 0,50 | 0,50 | 0,17 | 1,00 |
| | | | | | | | | |
| Total Project Person-month | | | Actual total: | 128,52 | 35,41 | 31,00 | 10,10 | 27,40 |
| | | | Planned total: | 125,61 | 41,00 | 31,00 | 20,61 | 24,00 |

7 Financial statements – Form C and Summary financial report

Summary financial report that consolidates the claimed Community contribution of all the beneficiaries in an aggregate form.

FP7 - Grant Agreement - Annex VI - Collaborative Project

| Summary Financial Report - Collaborative Project - to be filled by the coordinator | | | | | | | | | | | | | | | | | | | |
|--|------------------------|----------------------------|------------|------------------------|----------------------|------------------------|-------------------|------------------------|-----------|------------------------|-----------|--------------------------|---------------------|------------|----------|------|--|-----|--|
| Project acronym | | EYESHOTS | | Project nr | | 217077 | | Reporting period from | | 03/01/2010 | | to: | | 28/02/2011 | | Page | | 1/1 | |
| Funding scheme | | CP | | Type of activity | | | | | | | | Total (A)+(B)+(C)+(D) | | | | | | | |
| Beneficiary n° | Adjustment (Yes/No) | Organisation Short Name | RTD (A) | | Demonstration (B) | | Management (C) | | Other (D) | | | | | | | | | | |
| | | | Total | Max EC Contribution | Total | Max EC Contribution | Total | Max EC Contribution | Total | Max EC Contribution | Total | Max EC Contribution | Req. EC Contrib. | Receipts | Interest | | | | |
| 1 | no | UG | 217.308 | 162.981 | 0 | 0 | 34.175 | 34.175 | 0 | 0 | 251.483 | 197.156 | 197.156 | 0 | 0 | | | | |
| 1 | yes (3) | UG | 1.081 | 810 | 0 | 0 | | | 0 | 0 | 1.081 | 810 | 810 | 0 | 0 | | | | |
| 2 | no | WWU | 287.190 | 215.392 | 0 | 0 | 1.200 | 1.200 | 0 | 0 | 288.390 | 216.592 | 216.592 | 0 | | | | | |
| | yes (3) | WWU | 5.212 | 3.909 | | | | | 0 | 0 | 5.212 | 3.909 | | | | | | | |
| 3 | no | UNIBO | 109.875 | 82.406 | 0 | 0 | 0 | 0 | 0 | 0 | 109.875 | 82.406 | 82.406 | 0 | | | | | |
| 3 | yes (3) | UNIBO | 264 | 198 | 0 | 0 | 0 | 0 | 0 | 0 | 264 | 198 | 198 | 0 | | | | | |
| 4 | no | UJI | 219.905 | 164.928 | 0 | 0 | 0 | 0 | 0 | 0 | 219.905 | 164.928 | 164.928 | 0 | | | | | |
| 5 | no | K.U.Leuven | 283.046 | 212.284 | 0 | 0 | 950 | 950 | 0 | 0 | 283.996 | 213.234 | 213.234 | 0 | | | | | |
| 5 | yes (1) | K.U.Leuven | -3.030 | -2.272 | | | | | 0 | 0 | -3.030 | -2.272 | -2.272 | 0 | | | | | |
| 5 | yes (3) | K.U.Leuven | 2.422 | 1.816 | 0 | 0 | 0 | 0 | | | 2.422 | 1.816 | 1.816 | | | | | | |
| TOTAL | | | 1.123.273 | 842.452 | 0 | 0 | 36.325 | 36.325 | 0 | 0 | 1.159.598 | 878.777 | 874.868 | 0 | | | | | |

FP7 - Grant Agreement - Annex VI - Collaborative project

Form C - Financial Statement (to be filled in by each beneficiary)

| | | | |
|-----------------|------------|---|-----------------------|
| Project Number | 217077 | Funding scheme | Collaborative project |
| Project Acronym | EYESHOTS | | |
| Period from | 01/03/2010 | Is this an adjustment to a previous statement ? | No |
| To | 28/02/2011 | | |

| | | | |
|-------------------------|----------------------------------|---------------------------|-----------|
| Legal Name | UNIVERSITA DEGLI STUDI DI GENOVA | Participant Identity Code | 999976687 |
| Organisation Short Name | UG | Beneficiary nr | 1 |

| | | | |
|------------------------------|--|--|----|
| Funding % for RTD activities | | If flat rate for indirect costs, specify % | 60 |
|------------------------------|--|--|----|

1. Declaration of eligible costs/lump sum/flat-rate/scale of unit (in €)

| | Type of Activity | | | | |
|---------------------------|------------------|-------------------|----------------|-----------|-----------------|
| | RTD (A) | Demonstration (B) | Management (C) | Other (D) | Total (A+B+C+D) |
| Personnel costs | 111,553 | 0 | 12,185 | 0 | 123,738 |
| Subcontracting | 0 | 0 | 5,075 | 0 | 5,075 |
| Other direct costs | 24,265 | 0 | 6,003 | 0 | 30,268 |
| Indirect costs | 81,490 | 0 | 10,912 | 0 | 92,402 |
| Total costs | 217,308 | 0 | 34,175 | 0 | 251,483 |
| Maximum EU contribution | 162,981 | 0 | 34,175 | 0 | 197,156 |
| Requested EU contribution | | | | | 197,156 |

2. Declaration of receipts

Did you receive any financial transfers or contributions in kind, free of charge from third parties or did the project generate any income which could be considered a receipt according to Art.II. 17 of the grant agreement ?
If yes, please mention the amount (in €)

No

3. Declaration of interest yielded by the pre-financing (to be completed only by the coordinator)

Did the pre-financing you received generate any interest according to Art.II.19 ?
If yes, please mention the amount (in €)

No

4. Certificate on the methodology

Do you declare average personnel costs according to Art.II.14.1 ?

No

Is there a certificate on the methodology provided by an independent auditor and accepted by the Commission according to Art.II.4.4 ?

No

| | | | |
|---------------------|--|---|--|
| Name of the auditor | | Cost of the certificate (in €), if charged under this project | |
|---------------------|--|---|--|

5. Certificate on the financial statements

Is there a certificate on the financial statements provided by an independent auditor attached to this financial statement according to Art.II.4.4 ?

Yes

| | | | |
|---------------------|--|--------------------------------|-------|
| Name of the auditor | Studio Tributario Associato Tarigo & Sav | Cost of the certificate (in €) | 5,075 |
|---------------------|--|--------------------------------|-------|

6. Beneficiary's declaration on its honour

We declare on our honour that:

- the costs declared above are directly related to the resources used to attain the objectives of the project and fall within the definition of eligible costs specified in Articles II.14 and II.15 of the grant agreement, and, if relevant, Annex III and Article 7 (special clauses) of the grant agreement;
- the receipts declared above are the only financial transfers or contributions in kind, free of charge, from third parties and the only income generated by the project which could be considered as receipts according to Art.II.17 of the grant agreement;
- the interest declared above is the only interest yielded by the pre-financing which falls within the definition of Art.II.19 of the grant agreement;
- there is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in the event of an audit by the Commission and/or by the Court of Auditors and/or their authorised representatives.

| | |
|---------------------|---|
| Beneficiary's Stamp | Name of the Person(s) Authorised to sign this Financial Statement |
| | Matteo Pastorino |
| | Date & signature |
| | |

FP7 - Grant Agreement - Annex VI - Collaborative project

Form C - Financial Statement (to be filled in by each beneficiary)

| | | | |
|------------------------------|----------------------------------|---|-----------------------|
| Project Number | 217077 | Funding scheme | Collaborative project |
| Project Acronym | EYESHOTS | | |
| Period from | 01/03/2010 | Is this an adjustment to a previous statement ? | Yes |
| To | 28/02/2011 | Adjustment relates to Period : | 3 |
| Legal Name | UNIVERSITA DEGLI STUDI DI GENOVA | Participant Identity Code | 999976687 |
| Organisation Short Name | UG | Beneficiary nr | 1 |
| Funding % for RTD activities | | If flat rate for indirect costs, specify % | 60 |

1. Declaration of eligible costs/lump sum/flat-rate/scale of unit (in €)

| | Type of Activity | | | | |
|---------------------------|------------------|-------------------|----------------|-----------|-----------------|
| | RTD (A) | Demonstration (B) | Management (C) | Other (D) | Total (A+B+C+D) |
| Personnel costs | 676 | 0 | 0 | 0 | 676 |
| Subcontracting | 0 | 0 | 0 | 0 | 0 |
| Other direct costs | 0 | 0 | 0 | 0 | 0 |
| Indirect costs | 405 | 0 | 0 | 0 | 405 |
| Total costs | 1,081 | 0 | 0 | 0 | 1,081 |
| Maximum EU contribution | 810 | 0 | 0 | 0 | 810 |
| Requested EU contribution | | | | | 810 |

2. Declaration of receipts

Did you receive any financial transfers or contributions in kind, free of charge from third parties or did the project generate any income which could be considered a receipt according to Art.II. 17 of the grant agreement ?
If yes, please mention the amount (in €)

No

3. Declaration of interest yielded by the pre-financing (to be completed only by the coordinator)

Did the pre-financing you received generate any interest according to Art.II.19 ?
If yes, please mention the amount (in €)

No

4. Certificate on the methodology

Do you declare average personnel costs according to Art.II.14.1 ?
Is there a certificate on the methodology provided by an independent auditor and accepted by the Commission according to Art.II.4.4 ?

No

No

| | | | |
|---------------------|--|---|--|
| Name of the auditor | | Cost of the certificate (in €), if charged under this project | |
|---------------------|--|---|--|

5. Certificate on the financial statements

Is there a certificate on the financial statements provided by an independent auditor attached to this financial statement according to Art.II.4.4 ?

Yes

| | | | |
|---------------------|--|--------------------------------|-------|
| Name of the auditor | Studio Tributario Associato Tarigo & Sav | Cost of the certificate (in €) | 5,075 |
|---------------------|--|--------------------------------|-------|

6. Beneficiary's declaration on its honour

We declare on our honour that:

- the costs declared above are directly related to the resources used to attain the objectives of the project and fall within the definition of eligible costs specified in Articles II.14 and II.15 of the grant agreement, and, if relevant, Annex III and Article 7 (special clauses) of the grant agreement;
- the receipts declared above are the only financial transfers or contributions in kind, free of charge, from third parties and the only income generated by the project which could be considered as receipts according to Art.II.17 of the grant agreement;
- the interest declared above is the only interest yielded by the pre-financing which falls within the definition of Art.II.19 of the grant agreement;
- there is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in the event of an audit by the Commission and/or by the Court of Auditors and/or their authorised representatives.

| Beneficiary's Stamp | Name of the Person(s) Authorised to sign this Financial Statement |
|---------------------|---|
| | Matteo Pastorino |
| | Date & signature |
| | |

FP7 - Grant Agreement - Annex VI - Collaborative project

Form C - Financial Statement (to be filled in by each beneficiary)

| | | | |
|-----------------|------------|---|-----------------------|
| Project Number | 217077 | Funding scheme | Collaborative project |
| Project Acronym | EYESHOTS | | |
| Period from | 01/03/2010 | Is this an adjustment to a previous statement ? | No |
| To | 28/02/2011 | | |

| | | | |
|-------------------------|--|---------------------------|-----------|
| Legal Name | WESTFAELISCHE WILHELMS-UNIVERSITAET MUENSTER | Participant Identity Code | 999853691 |
| Organisation Short Name | WWU | Beneficiary nr | 2 |

| | | | |
|------------------------------|--|--|----|
| Funding % for RTD activities | | If flat rate for indirect costs, specify % | 60 |
|------------------------------|--|--|----|

1. Declaration of eligible costs/lump sum/flat-rate/scale of unit (in €)

| | Type of Activity | | | | Total (A+B+C+D) |
|---------------------------|------------------|-------------------|----------------|-----------|-----------------|
| | RTD (A) | Demonstration (B) | Management (C) | Other (D) | |
| Personnel costs | 143,558 | 0 | 0 | 0 | 143,558 |
| Subcontracting | 0 | 0 | 1,200 | 0 | 1,200 |
| Other direct costs | 35,936 | 0 | 0 | 0 | 35,936 |
| Indirect costs | 107,696 | 0 | 0 | 0 | 107,696 |
| Total costs | 287,190 | 0 | 1,200 | 0 | 288,390 |
| Maximum EU contribution | 215,392 | 0 | 1,200 | 0 | 216,592 |
| Requested EU contribution | | | | | 216,592 |

2. Declaration of receipts

Did you receive any financial transfers or contributions in kind, free of charge from third parties or did the project generate any income which could be considered a receipt according to Art.II. 17 of the grant agreement ?
If yes, please mention the amount (in €)

No

4. Certificate on the methodology

Do you declare average personnel costs according to Art.II.14.1 ?

No

Is there a certificate on the methodology provided by an independent auditor and accepted by the Commission according to Art.II.4.4 ?

No

| | | | |
|---------------------|--|---|--|
| Name of the auditor | | Cost of the certificate (in €), if charged under this project | |
|---------------------|--|---|--|

5. Certificate on the financial statements

Is there a certificate on the financial statements provided by an independent auditor attached to this financial statement according to Art.II.4.4 ?

Yes

| | | | |
|---------------------|------------------------|--------------------------------|-------|
| Name of the auditor | VDI Technologiezentrum | Cost of the certificate (in €) | 1,200 |
|---------------------|------------------------|--------------------------------|-------|

6. Beneficiary's declaration on its honour

We declare on our honour that:

- the costs declared above are directly related to the resources used to attain the objectives of the project and fall within the definition of eligible costs specified in Articles II.14 and II.15 of the grant agreement, and, if relevant, Annex III and Article 7 (special clauses) of the grant agreement;
- the receipts declared above are the only financial transfers or contributions in kind, free of charge, from third parties and the only income generated by the project which could be considered as receipts according to Art.II.17 of the grant agreement;
- the interest declared above is the only interest yielded by the pre-financing which falls within the definition of Art.II.19 of the grant agreement;
- there is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in the event of an audit by the Commission and/or by the Court of Auditors and/or their authorised representatives.

| | |
|---------------------|---|
| Beneficiary's Stamp | Name of the Person(s) Authorised to sign this Financial Statement |
| | Dr. Katharina Steinberg |
| | Date & signature |
| | |

FP7 - Grant Agreement - Annex VI - Collaborative project

Form C - Financial Statement (to be filled in by each beneficiary)

| | | | |
|------------------------------|--|---|-----------------------|
| Project Number | 217077 | Funding scheme | Collaborative project |
| Project Acronym | EYESHOTS | | |
| Period from | 01/03/2010 | Is this an adjustment to a previous statement ? | Yes |
| To | 28/02/2011 | Adjustment relates to Period : | 3 |
| Legal Name | WESTFAELISCHE WILHELMS-UNIVERSITAET MUENSTER | Participant Identity Code | 999853691 |
| Organisation Short Name | WWU | Beneficiary nr | 2 |
| Funding % for RTD activities | | If flat rate for indirect costs, specify % | 60 |

1. Declaration of eligible costs/lump sum/flat-rate/scale of unit (in €)

| | Type of Activity | | | | Total (A+B+C+D) |
|---------------------------|------------------|-------------------|----------------|-----------|-----------------|
| | RTD (A) | Demonstration (B) | Management (C) | Other (D) | |
| Personnel costs | 0 | 0 | 0 | 0 | 0 |
| Subcontracting | 0 | 0 | 0 | 0 | 0 |
| Other direct costs | 3,258 | 0 | 0 | 0 | 3,258 |
| Indirect costs | 1,954 | 0 | 0 | 0 | 1,954 |
| Total costs | 5,212 | 0 | 0 | 0 | 5,212 |
| Maximum EU contribution | 3,909 | 0 | 0 | 0 | 3,909 |
| Requested EU contribution | | | | | 3,909 |

2. Declaration of receipts

Did you receive any financial transfers or contributions in kind, free of charge from third parties or did the project generate any income which could be considered a receipt according to Art.II. 17 of the grant agreement ?
If yes, please mention the amount (in €)

No

4. Certificate on the methodology

Do you declare average personnel costs according to Art.II.14.1 ?

No

Is there a certificate on the methodology provided by an independent auditor and accepted by the Commission according to Art.II.4.4 ?

No

| | | | |
|---------------------|--|---|--|
| Name of the auditor | | Cost of the certificate (in €), if charged under this project | |
|---------------------|--|---|--|

5. Certificate on the financial statements

Is there a certificate on the financial statements provided by an independent auditor attached to this financial statement according to Art.II.4.4 ?

Yes

| | | | |
|---------------------|------------------------|--------------------------------|-------|
| Name of the auditor | VDI Technologiezentrum | Cost of the certificate (in €) | 1,200 |
|---------------------|------------------------|--------------------------------|-------|

6. Beneficiary's declaration on its honour

We declare on our honour that:

- the costs declared above are directly related to the resources used to attain the objectives of the project and fall within the definition of eligible costs specified in Articles II.14 and II.15 of the grant agreement, and, if relevant, Annex III and Article 7 (special clauses) of the grant agreement;
- the receipts declared above are the only financial transfers or contributions in kind, free of charge, from third parties and the only income generated by the project which could be considered as receipts according to Art.II.17 of the grant agreement;
- the interest declared above is the only interest yielded by the pre-financing which falls within the definition of Art.II.19 of the grant agreement;
- there is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in the event of an audit by the Commission and/or by the Court of Auditors and/or their authorised representatives.

| Beneficiary's Stamp | Name of the Person(s) Authorised to sign this Financial Statement |
|---------------------|---|
| | Dr. Katharina Steinberg |
| | Date & signature |
| | |

FP7 - Grant Agreement - Annex VI - Collaborative project

Form C - Financial Statement (to be filled in by each beneficiary)

| | | | |
|-----------------|------------|---|-----------------------|
| Project Number | 217077 | Funding scheme | Collaborative project |
| Project Acronym | EYESHOTS | | |
| Period from | 01/03/2010 | Is this an adjustment to a previous statement ? | No |
| To | 28/02/2011 | | |

| | | | |
|-------------------------|--|---------------------------|-----------|
| Legal Name | ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA | Participant Identity Code | 999993953 |
| Organisation Short Name | UNIBO | Beneficiary nr | 3 |

| | | | |
|------------------------------|--|--|----|
| Funding % for RTD activities | | If flat rate for indirect costs, specify % | 60 |
|------------------------------|--|--|----|

1. Declaration of eligible costs/lump sum/flat-rate/scale of unit (in €)

| | Type of Activity | | | | |
|---------------------------|------------------|-------------------|----------------|-----------|-----------------|
| | RTD (A) | Demonstration (B) | Management (C) | Other (D) | Total (A+B+C+D) |
| Personnel costs | 45,498 | 0 | 0 | 0 | 45,498 |
| Subcontracting | 0 | 0 | 0 | 0 | 0 |
| Other direct costs | 23,174 | 0 | 0 | 0 | 23,174 |
| Indirect costs | 41,203 | 0 | 0 | 0 | 41,203 |
| Total costs | 109,875 | 0 | 0 | 0 | 109,875 |
| Maximum EU contribution | 82,406 | 0 | 0 | 0 | 82,406 |
| Requested EU contribution | | | | | 82,406 |

2. Declaration of receipts

Did you receive any financial transfers or contributions in kind, free of charge from third parties or did the project generate any income which could be considered a receipt according to Art.II. 17 of the grant agreement ?
If yes, please mention the amount (in €)

No

4. Certificate on the methodology

Do you declare average personnel costs according to Art.II.14.1 ?

No

Is there a certificate on the methodology provided by an independent auditor and accepted by the Commission according to Art.II.4.4 ?

No

| | | | |
|---------------------|--|---|--|
| Name of the auditor | | Cost of the certificate (in €), if charged under this project | |
|---------------------|--|---|--|

5. Certificate on the financial statements

Is there a certificate on the financial statements provided by an independent auditor attached to this financial statement according to Art.II.4.4 ?

No

| | | | |
|---------------------|--|--------------------------------|--|
| Name of the auditor | | Cost of the certificate (in €) | |
|---------------------|--|--------------------------------|--|

6. Beneficiary's declaration on its honour

We declare on our honour that:

- the costs declared above are directly related to the resources used to attain the objectives of the project and fall within the definition of eligible costs specified in Articles II.14 and II.15 of the grant agreement, and, if relevant, Annex III and Article 7 (special clauses) of the grant agreement;
- the receipts declared above are the only financial transfers or contributions in kind, free of charge, from third parties and the only income generated by the project which could be considered as receipts according to Art.II.17 of the grant agreement;
- the interest declared above is the only interest yielded by the pre-financing which falls within the definition of Art.II.19 of the grant agreement;
- there is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in the event of an audit by the Commission and/or by the Court of Auditors and/or their authorised representatives.

| | |
|---------------------|---|
| Beneficiary's Stamp | Name of the Person(s) Authorised to sign this Financial Statement |
| | Prof. Giovanni Zamboni Gruppioni |
| | Date & signature |
| | |

FP7 - Grant Agreement - Annex VI - Collaborative project

Form C - Financial Statement (to be filled in by each beneficiary)

| | | | |
|------------------------------|--|---|-----------------------|
| Project Number | 217077 | Funding scheme | Collaborative project |
| Project Acronym | EYESHOTS | | |
| Period from | 01/03/2010 | Is this an adjustment to a previous statement ? | Yes |
| To | 28/02/2011 | Adjustment relates to Period : | 3 |
| Legal Name | ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA | Participant Identity Code | 999993953 |
| Organisation Short Name | UNIBO | Beneficiary nr | 3 |
| Funding % for RTD activities | | If flat rate for indirect costs, specify % | 60 |

1. Declaration of eligible costs/lump sum/flat-rate/scale of unit (in €)

| | Type of Activity | | | | Total (A+B+C+D) |
|---------------------------|------------------|-------------------|----------------|-----------|-----------------|
| | RTD (A) | Demonstration (B) | Management (C) | Other (D) | |
| Personnel costs | 165 | 0 | 0 | 0 | 165 |
| Subcontracting | 0 | 0 | 0 | 0 | 0 |
| Other direct costs | 0 | 0 | 0 | 0 | 0 |
| Indirect costs | 99 | 0 | 0 | 0 | 99 |
| Total costs | 264 | 0 | 0 | 0 | 264 |
| Maximum EU contribution | 198 | 0 | 0 | 0 | 198 |
| Requested EU contribution | | | | | 198 |

2. Declaration of receipts

Did you receive any financial transfers or contributions in kind, free of charge from third parties or did the project generate any income which could be considered a receipt according to Art.II. 17 of the grant agreement ?

If yes, please mention the amount (in €)

No

4. Certificate on the methodology

Do you declare average personnel costs according to Art.II.14.1 ?

Is there a certificate on the methodology provided by an independent auditor and accepted by the Commission according to Art.II.4.4 ?

No

No

| | | | |
|---------------------|--|---|--|
| Name of the auditor | | Cost of the certificate (in €), if charged under this project | |
|---------------------|--|---|--|

5. Certificate on the financial statements

Is there a certificate on the financial statements provided by an independent auditor attached to this financial statement according to Art.II.4.4 ?

No

| | | | |
|---------------------|--|--------------------------------|--|
| Name of the auditor | | Cost of the certificate (in €) | |
|---------------------|--|--------------------------------|--|

6. Beneficiary's declaration on its honour

We declare on our honour that:

- the costs declared above are directly related to the resources used to attain the objectives of the project and fall within the definition of eligible costs specified in Articles II.14 and II.15 of the grant agreement, and, if relevant, Annex III and Article 7 (special clauses) of the grant agreement;
- the receipts declared above are the only financial transfers or contributions in kind, free of charge, from third parties and the only income generated by the project which could be considered as receipts according to Art.II.17 of the grant agreement;
- the interest declared above is the only interest yielded by the pre-financing which falls within the definition of Art.II.19 of the grant agreement;
- there is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in the event of an audit by the Commission and/or by the Court of Auditors and/or their authorised representatives.

| Beneficiary's Stamp | Name of the Person(s) Authorised to sign this Financial Statement |
|---------------------|---|
| | Prof. Giovanni Zamboni Gruppioni |
| | Date & signature |
| | |

FP7 - Grant Agreement - Annex VI - Collaborative project

Form C - Financial Statement (to be filled in by each beneficiary)

| | | | |
|-----------------|------------|---|-----------------------|
| Project Number | 217077 | Funding scheme | Collaborative project |
| Project Acronym | EYESHOTS | | |
| Period from | 01/03/2010 | Is this an adjustment to a previous statement ? | No |
| To | 28/02/2011 | | |

| | | | |
|-------------------------|----------------------------------|---------------------------|-----------|
| Legal Name | UNIVERSITAT JAUME I DE CASTELLON | Participant Identity Code | 999882985 |
| Organisation Short Name | UJI | Beneficiary nr | 4 |

| | | | |
|------------------------------|--|--|----|
| Funding % for RTD activities | | If flat rate for indirect costs, specify % | 60 |
|------------------------------|--|--|----|

1. Declaration of eligible costs/lump sum/flat-rate/scale of unit (in €)

| | Type of Activity | | | | Total (A+B+C+D) |
|---------------------------|------------------|-------------------|----------------|-----------|-----------------|
| | RTD (A) | Demonstration (B) | Management (C) | Other (D) | |
| Personnel costs | 107,150 | 0 | 0 | 0 | 107,150 |
| Subcontracting | 0 | 0 | 0 | 0 | 0 |
| Other direct costs | 30,291 | 0 | 0 | 0 | 30,291 |
| Indirect costs | 82,464 | 0 | 0 | 0 | 82,464 |
| Total costs | 219,905 | 0 | 0 | 0 | 219,905 |
| Maximum EU contribution | 164,928 | 0 | 0 | 0 | 164,928 |
| Requested EU contribution | | | | | 164,928 |

2. Declaration of receipts

Did you receive any financial transfers or contributions in kind, free of charge from third parties or did the project generate any income which could be considered a receipt according to Art.II. 17 of the grant agreement ?
If yes, please mention the amount (in €)

No

4. Certificate on the methodology

Do you declare average personnel costs according to Art.II.14.1 ?

No

Is there a certificate on the methodology provided by an independent auditor and accepted by the Commission according to Art.II.4.4 ?

No

| | | | |
|---------------------|--|---|--|
| Name of the auditor | | Cost of the certificate (in €), if charged under this project | |
|---------------------|--|---|--|

5. Certificate on the financial statements

Is there a certificate on the financial statements provided by an independent auditor attached to this financial statement according to Art.II.4.4 ?

No

| | | | |
|---------------------|--|--------------------------------|--|
| Name of the auditor | | Cost of the certificate (in €) | |
|---------------------|--|--------------------------------|--|

6. Beneficiary's declaration on its honour

We declare on our honour that:

- the costs declared above are directly related to the resources used to attain the objectives of the project and fall within the definition of eligible costs specified in Articles II.14 and II.15 of the grant agreement, and, if relevant, Annex III and Article 7 (special clauses) of the grant agreement;
- the receipts declared above are the only financial transfers or contributions in kind, free of charge, from third parties and the only income generated by the project which could be considered as receipts according to Art.II.17 of the grant agreement;
- the interest declared above is the only interest yielded by the pre-financing which falls within the definition of Art.II.19 of the grant agreement;
- there is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in the event of an audit by the Commission and/or by the Court of Auditors and/or their authorised representatives.

| | |
|---------------------|---|
| Beneficiary's Stamp | Name of the Person(s) Authorised to sign this Financial Statement |
| | Angel Pascual del Pobil i Ferré / Antonio Montañana Riera |
| | Date & signature |
| | |

FP7 - Grant Agreement - Annex VI - Collaborative project

Form C - Financial Statement (to be filled in by each beneficiary)

| | | | |
|------------------------------|--------------------------------|---|-----------------------|
| Project Number | 217077 | Funding scheme | Collaborative project |
| Project Acronym | EYESHOTS | | |
| Period from | 01/03/2010 | Is this an adjustment to a previous statement ? | No |
| To | 28/02/2011 | | |
| Legal Name | KATHOLIEKE UNIVERSITEIT LEUVEN | Participant Identity Code | 999991334 |
| Organisation Short Name | K.U.Leuven | Beneficiary nr | 5 |
| Funding % for RTD activities | | If flat rate for indirect costs, specify % | 60 |

1. Declaration of eligible costs/lump sum/flat-rate/scale of unit (in €)

| | Type of Activity | | | | Total (A+B+C+D) |
|---------------------------|------------------|-------------------|----------------|-----------|-----------------|
| | RTD (A) | Demonstration (B) | Management (C) | Other (D) | |
| Personnel costs | 167,484 | 0 | 0 | 0 | 167,484 |
| Subcontracting | 0 | 0 | 950 | 0 | 950 |
| Other direct costs | 9,420 | 0 | 0 | 0 | 9,420 |
| Indirect costs | 106,142 | 0 | 0 | 0 | 106,142 |
| Total costs | 283,046 | 0 | 950 | 0 | 283,996 |
| Maximum EU contribution | 212,284 | 0 | 950 | 0 | 213,234 |
| Requested EU contribution | | | | | 213,234 |

2. Declaration of receipts

Did you receive any financial transfers or contributions in kind, free of charge from third parties or did the project generate any income which could be considered a receipt according to Art.II. 17 of the grant agreement ?
If yes, please mention the amount (in €)

No

4. Certificate on the methodology

Do you declare average personnel costs according to Art.II.14.1 ?

No

Is there a certificate on the methodology provided by an independent auditor and accepted by the Commission according to Art.II.4.4 ?

No

| | | | |
|---------------------|--|---|--|
| Name of the auditor | | Cost of the certificate (in €), if charged under this project | |
|---------------------|--|---|--|

5. Certificate on the financial statements

Is there a certificate on the financial statements provided by an independent auditor attached to this financial statement according to Art.II.4.4 ?

Yes

| | | | |
|---------------------|---------------|--------------------------------|-----|
| Name of the auditor | Ernst & Young | Cost of the certificate (in €) | 950 |
|---------------------|---------------|--------------------------------|-----|

6. Beneficiary's declaration on its honour

We declare on our honour that:

- the costs declared above are directly related to the resources used to attain the objectives of the project and fall within the definition of eligible costs specified in Articles II.14 and II.15 of the grant agreement, and, if relevant, Annex III and Article 7 (special clauses) of the grant agreement;
- the receipts declared above are the only financial transfers or contributions in kind, free of charge, from third parties and the only income generated by the project which could be considered as receipts according to Art.II.17 of the grant agreement;
- the interest declared above is the only interest yielded by the pre-financing which falls within the definition of Art.II.19 of the grant agreement;
- there is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in the event of an audit by the Commission and/or by the Court of Auditors and/or their authorised representatives.

| Beneficiary's Stamp | Name of the Person(s) Authorised to sign this Financial Statement |
|---------------------|---|
| | Ann Placlet-Claes |
| | Date & signature |
| | |

FP7 - Grant Agreement - Annex VI - Collaborative project

Form C - Financial Statement (to be filled in by each beneficiary)

| | | | |
|------------------------------|--------------------------------|---|-----------------------|
| Project Number | 217077 | Funding scheme | Collaborative project |
| Project Acronym | EYESHOTS | | |
| Period from | 01/03/2010 | Is this an adjustment to a previous statement ? | Yes |
| To | 28/02/2011 | Adjustment relates to Period : | 1 |
| Legal Name | KATHOLIEKE UNIVERSITEIT LEUVEN | Participant Identity Code | 999991334 |
| Organisation Short Name | K.U.Leuven | Beneficiary nr | 5 |
| Funding % for RTD activities | | If flat rate for indirect costs, specify % | 60 |

1. Declaration of eligible costs/lump sum/flat-rate/scale of unit (in €)

| | Type of Activity | | | | |
|---------------------------|------------------|-------------------|----------------|-----------|-----------------|
| | RTD (A) | Demonstration (B) | Management (C) | Other (D) | Total (A+B+C+D) |
| Personnel costs | 0 | 0 | 0 | 0 | 0 |
| Subcontracting | 0 | 0 | 0 | 0 | 0 |
| Other direct costs | -1,894 | 0 | 0 | 0 | -1,894 |
| Indirect costs | -1,136 | 0 | 0 | 0 | -1,136 |
| Total costs | -3,030 | 0 | 0 | 0 | -3,030 |
| Maximum EU contribution | -2,272 | 0 | 0 | 0 | -2,272 |
| Requested EU contribution | | | | | -2,272 |

2. Declaration of receipts

Did you receive any financial transfers or contributions in kind, free of charge from third parties or did the project generate any income which could be considered a receipt according to Art.II. 17 of the grant agreement ?

If yes, please mention the amount (in €)

No

4. Certificate on the methodology

Do you declare average personnel costs according to Art.II.14.1 ?

Is there a certificate on the methodology provided by an independent auditor and accepted by the Commission according to Art.II.4.4 ?

No

No

| | | | |
|---------------------|--|---|--|
| Name of the auditor | | Cost of the certificate (in €), if charged under this project | |
|---------------------|--|---|--|

5. Certificate on the financial statements

Is there a certificate on the financial statements provided by an independent auditor attached to this financial statement according to Art.II.4.4 ?

Yes

| | | | |
|---------------------|---------------|--------------------------------|-----|
| Name of the auditor | Ernst & Young | Cost of the certificate (in €) | 950 |
|---------------------|---------------|--------------------------------|-----|

6. Beneficiary's declaration on its honour

We declare on our honour that:

- the costs declared above are directly related to the resources used to attain the objectives of the project and fall within the definition of eligible costs specified in Articles II.14 and II.15 of the grant agreement, and, if relevant, Annex III and Article 7 (special clauses) of the grant agreement;
- the receipts declared above are the only financial transfers or contributions in kind, free of charge, from third parties and the only income generated by the project which could be considered as receipts according to Art.II.17 of the grant agreement;
- the interest declared above is the only interest yielded by the pre-financing which falls within the definition of Art.II.19 of the grant agreement;
- there is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in the event of an audit by the Commission and/or by the Court of Auditors and/or their authorised representatives.

| Beneficiary's Stamp | Name of the Person(s) Authorised to sign this Financial Statement |
|---------------------|---|
| | Ann Placlet-Claes |
| | Date & signature |
| | |

FP7 - Grant Agreement - Annex VI - Collaborative project

Form C - Financial Statement (to be filled in by each beneficiary)

| | | | |
|------------------------------|--------------------------------|---|-----------------------|
| Project Number | 217077 | Funding scheme | Collaborative project |
| Project Acronym | EYESHOTS | | |
| Period from | 01/03/2010 | Is this an adjustment to a previous statement ? | Yes |
| To | 28/02/2011 | Adjustment relates to Period : | 3 |
| Legal Name | KATHOLIEKE UNIVERSITEIT LEUVEN | Participant Identity Code | 999991334 |
| Organisation Short Name | K.U.Leuven | Beneficiary nr | 5 |
| Funding % for RTD activities | | If flat rate for indirect costs, specify % | 60 |

1. Declaration of eligible costs/lump sum/flat-rate/scale of unit (in €)

| | Type of Activity | | | | |
|---------------------------|------------------|-------------------|----------------|-----------|-----------------|
| | RTD (A) | Demonstration (B) | Management (C) | Other (D) | Total (A+B+C+D) |
| Personnel costs | 0 | 0 | 0 | 0 | 0 |
| Subcontracting | 0 | 0 | 0 | 0 | 0 |
| Other direct costs | 1,514 | 0 | 0 | 0 | 1,514 |
| Indirect costs | 908 | 0 | 0 | 0 | 908 |
| Total costs | 2,422 | 0 | 0 | 0 | 2,422 |
| Maximum EU contribution | 1,816 | 0 | 0 | 0 | 1,816 |
| Requested EU contribution | | | | | 1,816 |

2. Declaration of receipts

Did you receive any financial transfers or contributions in kind, free of charge from third parties or did the project generate any income which could be considered a receipt according to Art.II. 17 of the grant agreement ?
If yes, please mention the amount (in €)

No

4. Certificate on the methodology

Do you declare average personnel costs according to Art.II.14.1 ?

No

Is there a certificate on the methodology provided by an independent auditor and accepted by the Commission according to Art.II.4.4 ?

No

| | | | |
|---------------------|--|---|--|
| Name of the auditor | | Cost of the certificate (in €), if charged under this project | |
|---------------------|--|---|--|

5. Certificate on the financial statements

Is there a certificate on the financial statements provided by an independent auditor attached to this financial statement according to Art.II.4.4 ?

Yes

| | | | |
|---------------------|---------------|--------------------------------|-----|
| Name of the auditor | Ernst & Young | Cost of the certificate (in €) | 950 |
|---------------------|---------------|--------------------------------|-----|

6. Beneficiary's declaration on its honour

We declare on our honour that:

- the costs declared above are directly related to the resources used to attain the objectives of the project and fall within the definition of eligible costs specified in Articles II.14 and II.15 of the grant agreement, and, if relevant, Annex III and Article 7 (special clauses) of the grant agreement;
- the receipts declared above are the only financial transfers or contributions in kind, free of charge, from third parties and the only income generated by the project which could be considered as receipts according to Art.II.17 of the grant agreement;
- the interest declared above is the only interest yielded by the pre-financing which falls within the definition of Art.II.19 of the grant agreement;
- there is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in the event of an audit by the Commission and/or by the Court of Auditors and/or their authorised representatives.

| Beneficiary's Stamp | Name of the Person(s) Authorised to sign this Financial Statement |
|---------------------|---|
| | Ann Placlet-Claes |
| | Date & signature |
| | |

8 Certificates on the financial statements

List of Certificates that are due for this period, in accordance with Article II.4.4 of the Grant Agreement.

| Beneficiary | Organisation short name | Certificate provided? yes / no | Any useful comment, in particular if a certificate is not provided |
|--------------------|--------------------------------|---|---|
| 1 | UG | no | Expenditure threshold not reached |
| 2 | WWU | no | Expenditure threshold not reached |
| 3 | UNIBO | no | Expenditure threshold not reached |
| 4 | UJI | no | Expenditure threshold not reached |
| 5 | K.U.Leuven | yes | Expenditure threshold reached |

A copy of the duly signed certificate on the financial statement (CFS) has been uploaded on the NEF portal. The signed original will be sent by post.

Both partners UG and WWU have provided the CFS at the end of the 2nd period and the threshold has not reached in the 3rd (and final) reporting period.