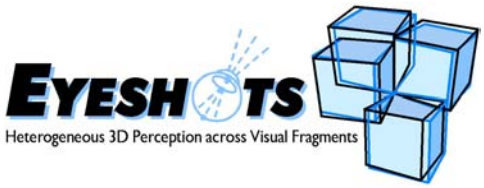

Project no.: FP7-ICT-217077
Project full title: Heterogeneous 3-D Perception across Visual Fragments
Project Acronym: EYESHOTS
Deliverable no: D8.1
Title of the deliverable: Literature Database

Date of Delivery:	31 May 2008	
Organization name of lead contractor for this deliverable:	UG	
Author(s):	All	
Participant(s):	All	
Workpackage contributing to the deliverable:	WP8	
Nature:	Demonstrator	
Version:	1.0	
Total number of pages:	28	
Responsible person:	Silvio P. Sabatini	
Revised by:		
Start date of project:	1 March 2008	**Duration:** 36 months

Project Co-funded by the European Commission within the Seventh Framework Programme		
Dissemination Level		
PU	Public	**X**
PP	Restricted to other program participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	

Abstract:
This report contains a formal description of the EYESHOTS Literature Database and a printout of its status contents at 31Oct 2008.

Contents

1 Motivations and description

Due to the highly multi-disciplinary character of EYESHOTS, we considered worthwhile to compile a bibliography list and source/access information of the basic and relevant literature from computer science, biocybernetics, sensing and motor control as well as learning that will provide a common basis for teaching and education of students. Accordingly, we have set-up the a Literature Database powered by a GPL web-based bibliography management system (Aigaion, `http://www.aigaion.nl/`), which will help students to acquaint themselves with the terminology used in the different fields and thus ensure good communication across partners.

The EYESHOTS literature database features an ever-growing collection of references (currently 164) related to the research activities conducted in the EYESHOTS project. The archive is functionally subdivided into two major sections:

1. a section that covers a list of (*fixed*) topics directly associated to the project Workplan, and
2. a section that contains a list of general topics[1], specified on a *dynamic* basis. The articulation of this section is aimed to provide a unifying perspective of the references used in the different project's components, which can be considered as an general asset of the project.

The database is freely accessible.

2 Subjects covered

- General[1]
  - Sensorimotor integration[1]
- Cognitive robotics[1]
  - Reaching and manipulation[1]
  - Vision[1]
- Experimental psychology[1]
  - Arm movements[1]
  - Attention[1]
  - Eye movements[1]
  - Shared attention[1]
- Neurophysiology[1]

[1]Still preliminary

  - Binocular vision[1]
  - Eye movements[1]
  - Visuomotor[1]

- Specific EYESHOTS topics
  - Binocular eye coordination (vergence and version movements) [Task 1.1]
  - Eye-position gain fields and coordinate transformations [Task 1.2]
  - Visuomotor binocular control [Task 1.3]
  - Bioinspired stereovision robot systems [Task 1.4]
  - Learning paradigms for visual stereopsis [Task 2.1]
  - Vergence control strategies (based on disparity detectors) [Task 2.1]
  - Interactive depth perception [Task 2.2]
  - Stereoscopic object recognition [Task 3.1]
  - Visual attention and receptive field dynamics [Task 3.2]
  - Selection of behavioral alternatives and working memory [Task 3.3]
  - Integrated perception-related and action-related representation [Task 4.1]
  - Visuo-motor descriptors of reachable objects [Task 4.2]
  - Multisensory egocentric representation of the 3D space [Task 4.3]
  - Joint vision/eye-position features visual cortical areas [Task 5.1]
  - Joint vision/reaching features in visual cortical areas [Task 5.2]
  - Motor description of fragment location and saccade adaptation [Task 5.3]
  - Cooperative human-human/robot behavior in shared workspace [Task 5.4]

3 Key features

Aigaion (see, `http://www.aigaion.nl/`) provides a bibliography management environment that supports a user (both individual researchers and research groups or projects) in organizing and managing literature. Its key features are the following:

Bibliography management

- Organization of publications in a topic tree.
- Annotation of publications by using notes.
- Easy cross-referencing between publications and notes.
- Browse publication lists with different sorting.
- Clear single-publication overview.

– Add multiple in- or external attachments per publication.

Data formats:

– Import from BibTeX and RIS.
– Export to BibTeX and RIS.
– Formatted export to txt, html or rtf in common citation styles.

User management:

– Set individual user rights, from read-only to administrator.
– Assign users to user groups.
– Customizable anonymous access.

Platforms:

– Platform independent, written in PHP/MySQL.

License:

– GNU General Public License (GPL).

4 Access

Public: via the EYESHOTS website (URL: `http://pspc3.dibe.unige.it/aigaion2root/`).

Private: through password authentication via the EYESHOTS website for the Members of the Consortium (ID: ********** ; PWD: **********).

5 Restrictions

Eyeshots' Consortium Members: uploading and sharing papers (refs and PDFs), editing topic and publication items.

Non Eyeshots' Members: read-only access to the bibliography database but not to the PDFs.

6 Single publication overview (details)

Eye movements in natural behavior r: e: [delete] [edit] [Bookmark] [BibTeX] [RIS]

Type of publication:	Article
Citation:	HayhoeBallard05
Journal:	Trends in Cognitive Sciences
Volume:	9
Number:	4
Year:	2005
Month:	April
Pages:	188 - 94
Abstract:	The classic experiments of Yarbus over 50 years ago revealed that saccadic eye movements reflect cognitive processes. But it is only recently that three separate advances have greatly expanded our understanding of the intricate role of eye movements in cognitive function. The first is the demonstration of the pervasive role of the task in guiding where and when to fixate. The second has been the recognition of the role of internal reward in guiding eye and body movements, revealed especially in neurophysiological studies. The third important advance has been the theoretical developments in the fields of reinforcement learning and graphic simulation. All of these advances are proving crucial for understanding how behavioral programs control the selection of visual information.
Doi:	10.1016/j.tics.2005.02.009
Userfields:	affiliation={Department of Brain {\&} Cognitive Science, University of Rochester, Rochester, NY 14627, USA. mary@cvs.rochester.edu}, language={eng}, date-added={2008-07-04 14:16:53 +0200}, date-modified={2008-07-04 14:17:08 +0200}, pii={S1364-6613(05)00059-8}, pmid={15808501},
Keywords:	Behavior, Cognition, Eye Movements, Humans, Monitoring: Ambulatory, vision
Authors	*Hayhoe, Mary* *Ballard, Dana*
Added by:	[]
Total mark:	0
Your mark:	Read/Add mark 1 5

Attachments [add attachment]

- Hayhoe_2005.pdf [delete] [edit] [unset main]

Notes [add note]

Topics [categorize publication]

- 3 - Experimental Psychology
  - Eye Movements
  - Shared attention
- Specific EYESHOTS topic:
  - T3.3 - Selection of behavioral alternatives and wo
  - T5.3 - Motor description of fragment location and

7 Database contents

GENERAL ▷ **Sensorimotor integration**

[1] N. Bhushan and R. Shadmehr. Computational nature of human adaptive control during learning of reaching movements in force fields. *Biological Cybernetics*, 81:39–60, 1999.

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