PROMISE

Participative Research labOratory for Multimedia and Multilingual Information Systems Evaluation

FP7 ICT 2009.4.3, Intelligent Information Management

Deliverable 2.5
Technology Transfer Report

Version 1.1, 29 September 2013

Network of Excellence co-funded by the 7th Framework Program of the European Commission, grant agreement no. 258191

Document Information

Deliverable number:	2,5
Deliverable title:	Technology Transfer Report
Delivery date:	29 September 2013
Lead contractor for this deliverable	UGOT
Author(s):	Jussi Karlgren, Melanie Imhof
Participant(s):	UGOT
Workpackage:	2
Workpackage title:	Stakeholders Involvement and Technology Transfer
Workpackage leader:	UGOT
Dissemination Level:	PU – Public
Version:	1.1
Keywords:	Technology Transfer

History of Versions

Version	Date	Status	Author (Partner)	Description/Approval Level
0.1	2/5/2013	Outline	UGOT	Circulated to contributing partners
0.9	28/8/2013	Structure	UGOT	
1.0	2/9/2013	First Draft	UGOT	Circulated to contributing partners
1.1	6/9/2013	Final	UGOT	Includes contributions from partners.

Abstract

This report gives an overview of how the various activities of PROMISE have contributed to spreading the results and insights gained in during the project lifetime to organisations outside PROMISE itself.

Network of Excellence co-funded by the 7th Framework Program of the European Commission, grant agreement no. 258191

Table of Contents

Network of Excellence co-funded by the 7th Framework Program of the European Commission, grant agreement no. 258191

Technology Transfer - one of the primary objectives of PROMISE

One of the four objectives of PROMISE, as given in the proposal and the work plan (the "description of work") is to **Stimulate knowledge transfer and uptake** of the methodology, know-how, tools, and best practices on multilingual and multimedia information systems developed and practiced within PROMISE to outside entities.

The design and development of the PROMISE open evaluation infrastructure, the organisation of regular evaluation activities, and the creation of a multidisciplinary community represent the concrete means for showing the advantages of cooperation between different methodologies for the overall multilingual and multimedia information access problem and will deliver to research and industrial stakeholders an effective instrument for carrying out their own projects, tasks, and ideas in the field.

In this context, the dissemination of the achieved results, the transfer of knowledge and technology, the creation of awareness about the solutions and their applications, the involvement of the stakeholders, and the sharing of the technological solutions are key factors and represent an integral part of the work of the project.

To facilitate uptake and participation by commercial entities, public bodies, and industries PROMISE has from its original inception planned to increase the contact surfaces between the academic context wherein PROMISE first was formulated and the practicioners in the field whose activities the research efforts in information access is intended to help and develop.

This is a multi-faceted effort. Most all of the activities in PROMISE are designed to facilitate technology takeup. This deliverable outlines the efforts made and lessons learnt during that process. The following specific efforts, initiatives, and activities have been pursued in the project, which all are described fully in deliverables authored for that purpose. References are given in the text, accordingly.

- Organisation of the PROMISE annual conference on experimental evaluation (see Tasks 2.4, 6.1, 6.2, 6.3, 6.4, and 7.5) where the results of the various evaluation activities can be presented and discussed as well as proposals for novel evaluation methods, metrics, and tasks addressing core issues in the evaluation field can be presented and discussed in order to advance the evaluation field itself;
- Organisation of a “technology take-up group” (see Task 2.6), which will incorporate stakeholders and possible consumers of project results, such as industrial entities, public bodies, and related research projects in order to facilitate the exchange of information with them;
- Organisation of a “technology transfer day” (see Task 7.4) to demonstrate the achievements of the project and promote the exploitation of its results;
- Organization of a researchers exchange program (see Task 7.3) to allow for closer collaborations among different research groups and organization, to actually transfer competencies, and facilitate the raise of new expertises;
- Organization of two summer schools on multilingual and multimedia information systems (see Task 7.3) and their evaluation in order to transfer the competencies gathered in the PROMISE network to young researchers who will enlarge the spectrum of their expertise

Network of Excellence co-funded by the 7th Framework Program of the European Commission, grant agreement no. 258191

- Preparation of best practices (see Tasks 2.5 and 4.5) based on the experimental evidence coming from the regular evaluation activities and of tutorial to train people to conduct evaluation in their own settings
- Organization of at least three brainstorming workshops (see Task 7.3) to raise awareness about the conducted activities, received feedback from a larger audience, and stimulate the discussion and innovation concerning the experimental evaluation.

Technology Transfer Activities

1 The Annual CLEF conference

Systematic and quantitative evaluation activities using shared tasks on shared resources have been instrumental in contributing to the success of information retrieval as a research field and as an application area in the past few decades. PROMISE is part of that research tradition, and was originally conceived by participants in the annual CLEF workshops, themselves inspired by the annual TREC evaluation conference with which the PROMISE communitiy continues to uphold close ties.

The conference format contributes to the continued evolution of the field by (i) providing access to infrastructure and evaluation resources that support researchers in the development of new approaches, and (ii) encouraging collaboration and interaction between researchers both from academia and industry.

As of 2010, CLEF has evolved from its previous format as a workshop for benchmarking and evaluation at the European conference on Digital Libraries to a self-sustaining and independent annual conference on experimental evaluation with research presentations, panels, poster and demo sessions and laboratory evaluation workshops interleaved during three and a half days of intense and stimulating research activities.

These workshops are either (1) hands-on activities and benchmarking experiments on shared tasks - referred to as evaluation labs - or (2) discussion and exploration of new evaluation methodologies, ideas, and approaches to experimentation and data - referred to as evaluation workshops. These latter typically - but not necessarily - progress to a lab in subsequent CLEF conferences. This progression from a lab workshop to an evaluation lab is a development track which is encouraged - but lab workshops do not need to be associated with an evaluation lab to address applicational, theoretical, or methodological issues.

The conference activities are reported in an array of deliverables: D7.2, D7.5 and D7.9 for the particulars about the attendance and participation at the conferences, and D6.1, D6.2, and D6.3 for the content and lessons learnt.

CLEF	2010	2011	2012
Host	Padova	Amsterdam	Rome
Number of participants	140	170	200
Corporate entities represented	12	12	20

Network of Excellence co-funded by the 7th Framework Program of the European Commission, grant agreement no. 258191

Reported in deliverable	D7.2	D7.5	D7.9

For the purposes of assessing Technology Transfer the table given here shows how the participation of practicioners as represented by corporate entities has grown over the past years.This is an intended and desirable evolution.

2 CLEF lab evolution during PROMISE

In the first ten years of CLEF, the evaluation activities were accepted and continued after deliberation in a steering committee, mainly as judged on their academic merits and on their potential in attracting participants. For the new cycle of CLEF conferences this procedure became somewhat more structured, with the formation of a lab organisation committee (CLEF-LOC) which issues a call for lab proposals and evaluates incoming proposals according to a set of public reviewing criteria:

1. The appropriateness of the lab to the overall information access agenda pursued by CLEF and its fit to other labs considered for inclusion.
2. Potential impact of the lab to current and future real-world information access challenges, current commercial applications, and future promising application arenas.
3. Number of potential participants, critical mass.
4. Innovation, uniqueness and amount of contribution to new knowledge in the field.
5. Focus of lab program, and specifically for evaluation labs: Practicability and feasibility of task, soundness of methodology.
6. For returning proposals: Movement beyond previous year's labs.
7. Coverage of theory and practice,breadth of organising group, contact surfaces to stakeholders and research efforts.

These criteria are intended to stress the grounding of the shared tasks and the discussions in practical application and stakeholder activities. All lab proposals - whether lab workshops or evaluation labs - were from 2011 onwards required to address the issue of validation through explicitly stated hypotheses of usage in order validate their benchmarking activity with references to real-world tasks.

The proposals are now (among other things) required to include language in their proposal on a ***usage scenario*** and a description of the ***usage domain*** the proposed activity is intended to contribute to; identify and enlist ***task-relevant stakeholders*** in an active role in the lab to validate the scenarios; to describe potential industry stakeholders; and ideally include representatives from several different academic sites and industrial stakeholders in a steering committee.

This has resulted in an active participation from practicioners such as public bodies or industrial partners through steering committees and programme committees in each of the newly accepted labs in CLEF.

3 Technology Take-up Group

The project proposal planned for the formation of a formal "Technology Take-up Group" as a mechanism for facilitating the incorporation of stakeholders and possible consumers of project results such as industrial entities, public bodies, and related

research projects with regularly occurring meetings to disseminate information and invite participants to provide input to the project.

This idea was modified during the course of the project to fit the experiences gained from the CHORUS Coordination Action[1]. CHORUS organised Industrial Think Tanks with much the same objectives as the intentions for the PROMISE Technology Take-up Group, but found that industrial participation was somewhat less intensive than desired: the commitment of effort to participate in recurring meetings was difficult to schedule and the open discussion format was difficult to establish in view of the presence of potential competitors at the table. Instead PROMISE has proceeded in one-on-one discussions with stakeholders for the primary purpose of gathering information and additionally informing stakeholders of state-of-the-art methodologies in information access. The stakeholder contributions to the use case model (described in D2.4), new evaluation metrics (described in DX.X), best practice guidelines (described in D2.3), and evaluation in the wild (described in D4.2) have been crucial but would not have been as useful if they would have been conducted in workshops organised to fit the project rather than the everyday activities of the stakeholders in question.

4 Technology Transfer Day

PROMISE organised a Technology Transfer Day at the CeBIT Consumer Electronics Expo in Hannover, Germany, from March 5 to March 9, 2013. The goal was (i) to stimulate the discussion on Information Access technologies and provide a forum in which invited speakers could share their experiences, identify common strategies and needs, and detect future challenges in this field; (ii) to facilitate communication of research advances and achievements and (iii) to promote the exploitation of the project results.

The event spanned over the entire week according to the following timetable:

(i) Tuesday, March 5, 2013 from 02.00 p.m. until 02.45 p.m.: a 45 minute slot in the main program of the CeBIT Global Conference (CGC) - Power Stage. The title of this session was: *"Is your Search Engine Making you Miss Business Opportunities? How Lessons learned in Research about Information Access Evaluation can Help Industry. "*

(ii) Wednesday, March 6, 2013: a whole day event in the middle of CeBIT exhibition grounds at the Convention Center targeting three different kinds of stakeholders in separate sessions: decision makers from consumer companies, decision makers from producer companies, and technology people.

(iii) For the entire period of the exhibition (5-9 March) PROMISE staffed a booth titled "*EU Language & Big Data Projects*" together with other EU projects.

Details on the Technology Transfer Day are reported in D7.11.

1 CHORUS: Coordinated approach to the European effort on audiovisual search engines: A 2006-2009 FP6 Coordination Action.

Network of Excellence co-funded by the 7th Framework Program of the European Commission, grant agreement no. 258191

5 Researcher exchange program

The researcher exchange program was instituted to allow for closer collaborations among different research groups and organization, to actually transfer competencies, and facilitate the raise of new expertises. This program has been well utilised by project partners and 61 visits where researchers from one partner has visited another partner for cooperative research efforts have been conducted during the project period.

The researcher exchange program is reported in detail in D7.4, D7.8, and D7.12.

6 Winter Schools on multilingual and multimedia information

PROMISE planned the organization of two summer schools on multilingual and multimedia information systems. These events were reformulated as Winter Schools and organised in alpine resorts in Zinal, Switzerland (2012) and in Bressanone, Italy (2013). These events have been hugely successful and the young researchers who have participated in them have been given an insight in both academic and industrial research through a roster of internationally very well established speakers both within and without the PROMISE project partners. This has strengthened the competence of the young researchers who in many cases lack adequate supervision and advisor competence in our area in their respective home institutions, and it has also opened the options for career paths in industrial research for many of them.

The winter schools are reported in detail in D7.7 and D7.13.

7 Best Practice Guidelines

For most of the stakeholders in our field, information access technology is secondary to their primary business objectives. Although they are interested in improving those information access mechanisms which are directed to their customers, they will only do so if they can motivate the effort to operate and evaluate the system continuously and to acquire the required expertise. Based on this insight PROMISE has prepared two documents: “Best Practice recommendations” and “Tutorial on Evaluation in the Wild”.

The Best Practice report makes best practice recommendations for developers of information access systems and points out limitations and conditions. The recommendations are supported by references to relevant publications.

In addition the Tutorial on Evaluation in the Wild Report proposes a methodology to evaluate operational information access systems. The evaluation can be conducted by industry stakeholders using their own settings and an operational system in place.

These documents have been prepared by project partners after extensive contacts with stakeholders during the course of the project, executed in lieu of the Technology Take-up Group mentioned above.

The Best Practice guidelines and the Tutorial on Evaluation in the Wild documentation are given in full in D2.3 and D4.2, respectively.

8 Brainstorming workshops

PROMISE has organised brainstorming workshops to raise awareness about the conducted activities, received feedback from a larger audience, and stimulate the discussion and innovation concerning the experimental evaluation.

The first of the workshops was organised in conjunction with the 2011 CIKM conference in Glasgow under the title **Data infrastructurEs for Supporting Information Retrieval Evaluation -** DESIRE 2011 and is reported in detail in the workshop proceedings (available from ACM), in a condensed report published in SIGIR Forum, and in D7.6.

The second and third of the brainstorming workshops were the international Eurovis workshops on visual analytics: EuroVA 2011 and EuroVA 2012, co-organized by PROMISE, held in May 2011 in Bergen and in June 2012 in Bordeaux respectively. These workshops were designed as to bridge the research fields of information access and of visual analytics. Details are given in the workshop proceedings[2] and in D7.6.

The fourth of the workshops was organised as a self-sufficient event in May 2012 in Padua, under the title **PROMISE Retreat - Prospects and Opportunities for Information Access Evaluation**. Details are given in the workshop proceedings[3], in a condensed report published in SIGIR Forum, and in D7.10.

In addition PROMISE partners have participated in numerous other similar brainstorming events, most prominently e.g. in **SWIRL'12: The Second Strategic Workshop on Information Retrieval in Lorne**.

9 Use case model

One of the central activities of WP2 has been the formulation of a use case model - a generalised representation of information access activities involving users and systems with a number of parameters to be set by interviews to fit a specific use case or a set of scenarios. The use case model is then intended to be useful for the formulation or selection of evaluation criteria. This work has been quite challenging and has relied on the cooperation with a number of public bodies and corporate entities which have contributed their time and effort in interviews and discussions on how the general model can fit to their needs. This effort has as an intended side effect that the partner organisation is informed of how use cases can be used not only for system design but for information access evaluation.

The use case model is described in detail in D2.4; the contact activities in D7.8; the stakeholder contact protocol, resulting from these contacts is fully specified in a separate document which is intended to form the basis of a coming publication.

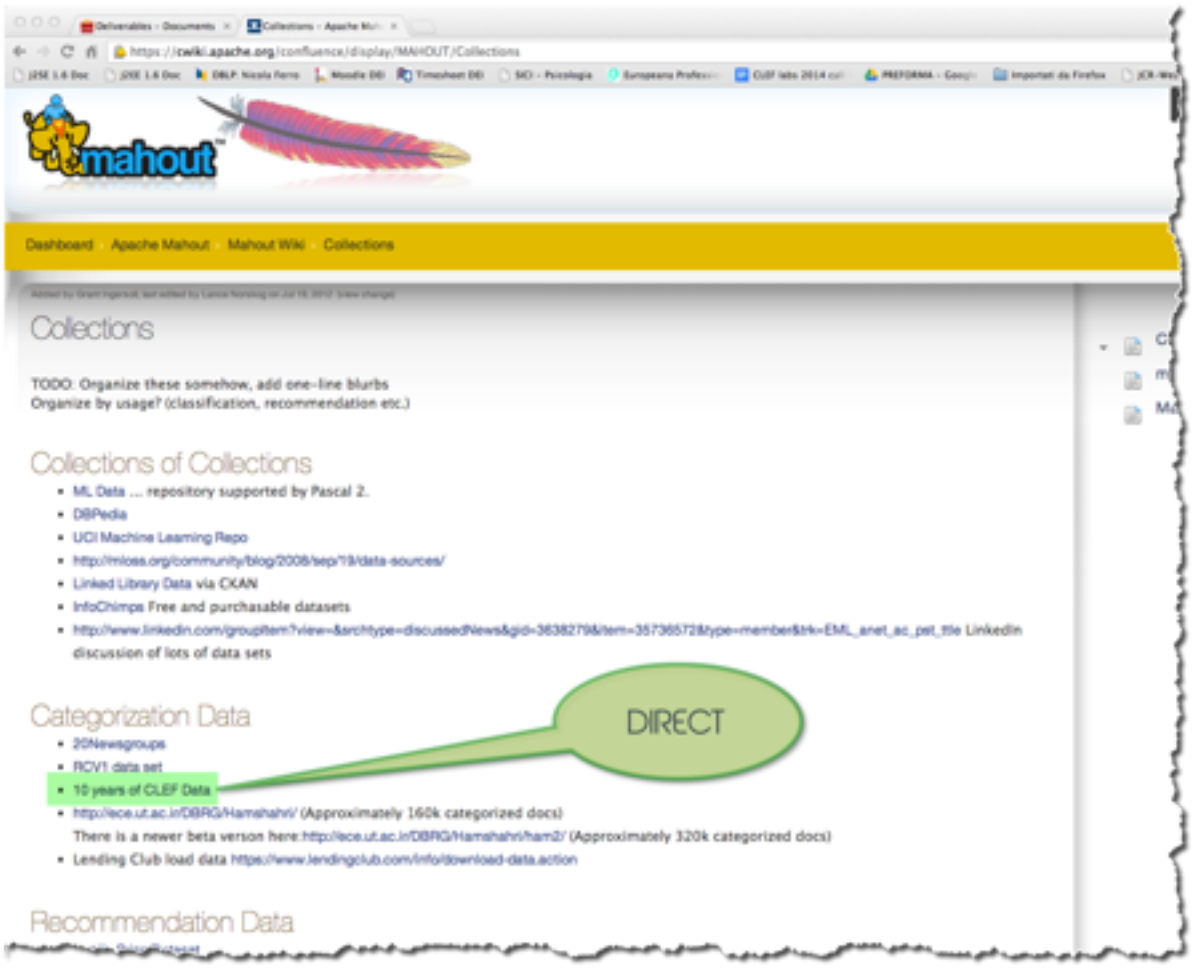
---

2 http://diglib.eg.org/EG/Publications/Data/peEuroVA11.htm; http://diglib.eg.org/EG/Publications/Data/peEuroVA12.htm

3 ISBN 978-88-6321-039-2

10 Evaluation Infrastructure takeup

The evaluation infrastructure developed in PROMISE has been used to carry out the evaluation activities of the project, but is intended to be put to broader use for future evaluation campaigns outside PROMISE and beyond the project life span. This effort will continue through the promotion of the infrastructure to the open source community via Apache. Initial contacts with educational institutions to use the system in classes for engineering students have been taken with ZHAW, Zürich and KTH, Stockholm.



11 Dissemination statistics

During the course of the project the work and results from the project have been published academically in numerous venues. Details for the publications are found in D7.4, D7.8, and D7.12.

	2010	2011	2012	2013	
Book chapters	3	6	5	3	17
Journal papers	4	8	11	5	28
Conference papers	8	19	25	10	62
Workshop papers	5	23	13	3	44
	20	56	54	21	151