



Social Semantic Emotion Analysis for Innovative Multilingual Big Data Analytics Markets

D7.7 Dissemination Report, final version

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| Project ref. no | H2020 141111 |
| Project acronym | MixedEmotions |
| Start date of project (dur.) | April 01, 2015 (24 Months) |
| Document due Date | March 31, 2017 |
| Responsible for deliverable | UPM |
| Reply to | jfernando@dit.upm.es |
| Document status | Final |

| | |
|--------------------------------------|---|
| Project reference no. | H2020-141111 |
| Project working name | MixedEmotions |
| Project full name | Social Semantic Emotion Analysis for Innovative Multilingual Big Data Analytics Markets |
| Document name | D7.7 Dissemination_Report_Final |
| Security (distribution level) | PU |
| Contractual delivery date | March 31, 2017 |
| Deliverable number | D7.7 |
| Deliverable name | Dissemination Report, final version |
| Type | Report |
| Version | Final |
| WP / Task responsible | WP7 |
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| Document Location | https://confluence.deri.ie:8443/display/mixedem/Mixed Emotions+Deliverables+M13-M24 |

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Executive Summary

MixedEmotions includes a comprehensive dissemination plan, detailed in deliverable D7.5 that designed a strategy to provide visibility and facilitate the inclusion of resources outside the consortium by disseminating the results of the project.

This document describes the overall Awareness and Engagement dissemination activities performed in MixedEmotions throughout the 24 months of the project, based on the initial plan defined in D7.5 and the updates that came up during this period. The overall dissemination activities during the project include: technology fairs, scientific conferences and publications; collaborations with other projects; and contributions to selected standardization bodies. In addition, this dissemination plan includes demonstration activities: a tutorial session during the SEMANTICs workshop and frequent webinars.

1 Introduction

The dissemination strategy of MixedEmotions, as defined in D7.5, has consisted of three fundamental strategies: **Awareness**, in which promotion of the project and its aims has been pursued; **Engagement**, a compound of activities that aimed at involving more companies and individuals in the development of the different tools and schemas of MixedEmotions, as well as getting them to use them and provide feedback; and finally **Demonstration**, whose intention was to show specific results of the project. The difference between Demonstration and Awareness is the focus on results and dissemination of outcomes.

The document is structured as follows. First, section 2 describes the Awareness activities performed. Section 3 covers Engagement activities through several sub-sections, such as online presence (section 3.1), end-user dissemination (section 3.2), and demonstration activities held during the whole project (section 3.3). Finally, section 4 presents the conclusions of the project dissemination activity.

2 Awareness Activities

The objective of Awareness actions is to spread the word about the MixedEmotions project, inform possible users and clients, and reach potential collaborators. This section covers the activities performed for academia (publications, academic presentation and events) and practitioners (professional presentations and events) during the project.

2.1 Academic Events

The following table illustrates the academic events the MixedEmotions partners have attended during the M1-M24 period of the project, and where the project has been presented, either formally or informally.

| Conference | Partner | Date | Talk / Paper title | Website |
|---|----------|-----------------|--|---|
| The 41st IEEE International Conference on Acoustics, Speech and Signal Processing | PX + BUT | Mar 20-25, 2015 | Exploring the Importance of Individual Differences to the Automatic Estimation of Emotions Induced by Music | http://www.icasssp2016.org/ |
| The 41st IEEE International Conference on Acoustics, Speech and Signal Processing | UP | Mar 20-25, 2015 | Adieu Features ? End-To-End Speech Emotion Recognition Using A Deep Convolutional Recurrent Network | http://www.icasssp2016.org/ |
| The 41st IEEE International Conference on Acoustics, Speech and Signal Processing | UP | Mar 20-25, 2015 | ross Lingual Speech Emotion Recognition Using Canonical Correlation Analysis On Principal Component Subspace | http://www.icasssp2016.org/ |
| The 41st IEEE International Conference on Acoustics, Speech and Signal Processing | UP | Mar 20-25, 2015 | Enhanced Semi-Supervised Learning For Multimodal Emotion Recognition | http://www.icasssp2016.org/ |
| International Conference on Computational Semantics | NUIG | Apr 14-17, 2015 | Curse or Boon? Presence of Subjunctive Mood in Opinionated Text. | http://iwcs2015.github.io/ |
| 4th Workshop on Linked Data in Linguistics | UPM | July 31, 2015 | A Linked Data Model for Multimodal Sentiment and Emotion Analysis | http://ldl2015.linguistic-lod.org/ |
| TASS2015 Workshop on | UPM | Sep 15, 2015 | Aspect based Sentiment Analysis of Spanish Tweets | http://www.sngularmeaning.te |

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| Sentiment Analysis at SEPLN | | | | am/TASS2015/tass2015.php |
| MediaEval 2015 Multimedia Benchmark Workshop | UP | Sep 14-15, 2015 | The ICL-TUM-PASSAU Approach for the MediaEval 2015 “Affective Impact of Movies” Task | http://www.multimediaeval.org/mediaeval2015/ |
| Conference on Empirical Methods in Natural Language Processing | NUIG | Sep 17-21, 2015 | Towards the extraction of customer-to-customer suggestions from reviews | http://www.emnlp2015.org/ |
| 2015 International Conference on Affective Computing and Intelligent Interaction (ACII) | UP | Sept 21-24, 2015 | Cross-Language Acoustic Emotion Recognition : An Overview and Some Tendencies | |
| 2015 Workshop on Topic Models: Post-Processing and Applications | NUIG | Oct 19, 2015 | Community Topic Usage in Social Networks | https://sites.google.com/site/ikm2015topicmodels/ |
| The 5th Audio/Visual + Emotion Challenge and Workshop | UP | Oct 26, 2015 | Exploring the Importance of Individual Differences to the Automatic Estimation of Emotions Induced by Music | sspnet.eu/avec2015/ |
| Global WordNet Conference | NUIG | Jan 27-30, 2016 | CILI: the Collaborative Interlingual Index. | http://gwc2016.racai.ro/ |
| Global WordNet Conference | NUIG | Jan 27-30, 2016 | Toward a truly multilingual Global Wordnet Grid. | http://gwc2016.racai.ro/ |
| LREC Workshop Emotion and Sentiment Analysis (ESA 2016) | NUIG | May 24, 2016 | Emoji as Emotion Tags for Tweets, LREC workshop on Emotion and Sentiment Analysis | |
| Language Resources and Evaluation Conference | BUT | May 23-28, 2016 | WTF-LOD - A New Resource for Large-Scale NER Evaluation | http://www.lrec-conf.org/proceedings/lrec2016/pdf/386_Paper.pdf |
| SemEval-2016 : Semantic Evaluation Exercises | BUT | June 16-17, 2016 | BUTknot: Supervised Machine Learning and Term Substitution Approach in Aspect Category Detection | http://alt.qcri.org/semeval2016/task5/ |
| SentISData (DSAA 2016) | UPM | Oct 17, 2016 | Senpy: A Pragmatic Linked Sentiment Analysis Framework | http://gsi.dit.upm.es/administrator/component/component_s/com_research/files/publicati |

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| | | | | ons/senpy.pdf |
| International Conference on Language and Emotion | NUIG | Nov 24, 2016 | MixedEmotions: Mining Emotions in Big Data | https://canal.uned.es/mmobj/index/id/53615 |
| International Conference on Computational Linguistics | NUIG | Dec 13-16, 2016 | Expanding wordnets to new languages with multilingual sense disambiguation | |

Moreover, the following journal papers were published:

| Journal | Paper | Partner | Date |
|--|--|---------|-----------|
| IEEE Transactions on Affective Computing (TAC) | Continuous Estimation of Emotions in Speech by Dynamic Cooperative Speaker Models | UP | 2016 |
| IEEE Transactions on Knowledge and Data Engineering (TKDE) | Computing Semantic Similarity of Concepts in Knowledge Graphs | UPM | Sep, 2016 |
| Expert Systems with Applications | Enhancing Deep Learning Sentiment Analysis with Ensemble Techniques in Social Applications | UPM | Jan, 2017 |

The following table illustrates the book chapters the MixedEmotions partners have authored during the M1-M24 period of the project.

| Book Chapter | Book Title | Partner | Date |
|--|--------------------------------|----------|---------------|
| Linked Data Models for Sentiment and Emotion Analysis in Social Networks | Handbook of Sentiment Analysis | UPM,NUIG | January, 2016 |
| Suggestion Mining from Social Media | Handbook of Sentiment Analysis | NUIG | January, 2016 |

The following table illustrates bachelor and master in the frame of the MixedEmotions project completed during the M1-M24 period.

| Thesis | Partner | Date |
|---|---------|----------------|
| Development of an Emotion Analysis System in a University community, Ignacio Corcuera, 2015 | UPM | July, 2015 |
| Development of a Named Entity Recognition System based on Ensemble Machine Learning Algorithms, Constantino Román, 2015 | UPM | July, 2015 |
| Development of a Social Media Crawler for Sentiment Analysis, José Emilio Carmona, 2016 | UPM | February, 2016 |

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| Reputation characterisation using Social Network Analysis, Antonio Prada, 2016 | UPM | June, 2016 |
| Trie Structures for Large Text Data Processing, 2016 | BUT | June, 2016 |
| Tracking and Recognition of People in Video, 2016 | BUT | June, 2016 |
| Development of a Dashboard for Sentiment Analysis of Football in Twitter based on Web Components and D3.js, Alberto Pascual, 2016 | UPM | June, 2016 |
| Development of a Social Media Monitoring System based on Elasticsearch and Web Components Technologies, Enrique Conde, 2016 | UPM | June, 2016 |
| Development of a Social Influence Graph Analytics System for Big Social Data, Pablo Álvarez, 2016 | UPM | July, 2016 |
| Development of an Aspect-based Sentiment Analyzer for the Social Web and Application to Product Reviews, Manuel García-Amado, 2016 | UPM | July, 2016 |
| Prototype of a Sentiment Analysis System Based on Ensemble Algorithms for Combining Deep and Surface Machine Learning Techniques, Oscar Araque , 2016 | UPM | July, 2016 |

Lastly, two PhD theses were produced.

| Thesis | Partner | Date |
|--|---------|----------------|
| Leveraging Wikipedia-based Features for Entity Relatedness and Recommendation, Nitish Aggarwal | NUIG | April, 2016 |
| Machine Translation of Domain-Specific Expressions within Ontologies and Documents, Mihael Arcan | NUIG | November, 2016 |

2.2 Professional Events

This table shows the events attended by industry partners during the M1-M24 period of the project, where MixedEmotions has been presented or mentioned.

| Conference | Partner | Date | Website |
|--|-------------------|-----------------|---|
| ISS Europe | PX | Jun 7-9, 2015 | http://www.issworldtraining.com/ISS_EUROPE/ |
| BDVA Event | UPM, NUIG; ES, ST | Jun 17-19, 2015 | http://www.bdva.eu/?q=summit |
| RRI-ICT | UPM | July, 2015 | http://rri-ict.eu/ |
| International Conference on Machine Learning (ICML'15) | UP | July 11, 2015 | http://icml.cc/2015/ |
| INTERSPEECH 2015 | PX | Sep 6-10, 2015 | http://interspeech2015.org/ |
| ICT Lisbon | UPM, ES | Oct 1, 2015 | |
| Invited talk, Cognitive | UP | Oct 2, 2015 | https://sites.google.com/site/cog |

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| Computing Workshop 2015 | | | nitivecomputing2015/ |
| LT-Innovate | UPM, NUIG | Nov, 2015 | http://www.lt-innovate.org/ |
| Invited talk, Data Science and Engineering | UP | Nov 27, 2015 | |
| Invited talk, National Tsing Hua University | UP | Mar 17, 2016 | |
| SWS 2016 Speech Signal Processing Workshop, ACL/ACLCLP | UP | Mar 18, 2016 | http://speech.ee.ntu.edu.tw/sws2016/index.en.html |
| ICASSP (2016) | UP | Mar 20-20, 2016 | http://www.icassp2016.org/ |
| Invited talk, Xing Jian Lectures | UP | Mar 25, 2016 | http://www.scie-en.shu.edu.cn/Default.aspx |
| Invited talk, “Orange Hour” | UP | Apr 19, 2016 | www.gfk-verein.org/veranstaltungen/orange-hour |
| Invited talk, Google | UP | Jul 11, 2016 | http://icml.cc/2015/ |
| IJCAI 2016 | UP | July 9-15, 2016 | http://ijcai-16.org |
| Interspeech (2016) | UP | Sep 8-12, 2016 | |
| MixedEmotions Tutorial | UPM, UP, NUIG, BUT | Sep 12, 2016 | http://2016.semantics.cc/satellite-events/mixedemotions-big-data-platform-multilingual-and-multimodal-emotion-analysis |
| CHiME 2016 Workshop), San Francisco, CA | UP | Sep 13, 2016 | http://spandh.dcs.shef.ac.uk/chime_workshop/ |
| Invited taster talk, Open Day | UP | Sep 17, 2016 | |
| IJCAI 2016 Workshop, IJCAI/AAAI | UP | Oct 7, 2016 | http://ijcai-16.org/index.php/welcome/view/workshops |
| Language, Data and Knowledge conference 2017 | NUIG | June 19-20, 2017 | http://ldk2017.org/ |

The following table summarizes the number of papers presented in each conference during the M1-M24 period:

| Conference | Workshops | Papers | Date |
|------------------|-----------|--------|-----------------|
| IWCS 2015 | | 1 | Apr, 2015 |
| ACII 2015 | | 1 | Jul, 2015 |
| LDL 2015 | | 1 | Aug, 2015 |
| TASS 2015 | | 1 | Sep, 2015 |
| TSD 2015 | | 1 | Sep 14-17, 2015 |
| EMNLP 2015 | | 1 | Sep, 2015 |
| CIKM 2015 | | 1 | Oct, 2015 |
| AVEC 2015 | 3 | 1 | Oct 26, 2015 |
| GWC 2016 | | 2 | Jan 27-30, 2016 |
| ICASSP 2016 | | 4 | Mar, 2016 |
| LREC 2016 | 3 | 5 | May 23-28, 2016 |
| IJCAI 2016 | 1 | 1 | Jul 9-15, 2016 |
| ACL 2016 | | 2 | Aug 7-12, 2016 |
| Interspeech 2016 | | 3 | Sep 8-12, 2016 |
| MLSP 2016 | | 1 | Sep 13-16, 2016 |
| AVEC 2016 | 1 | 2 | Oct 16, 2016 |
| ICMI 2016 | | 1 | Nov 12-16, 2016 |

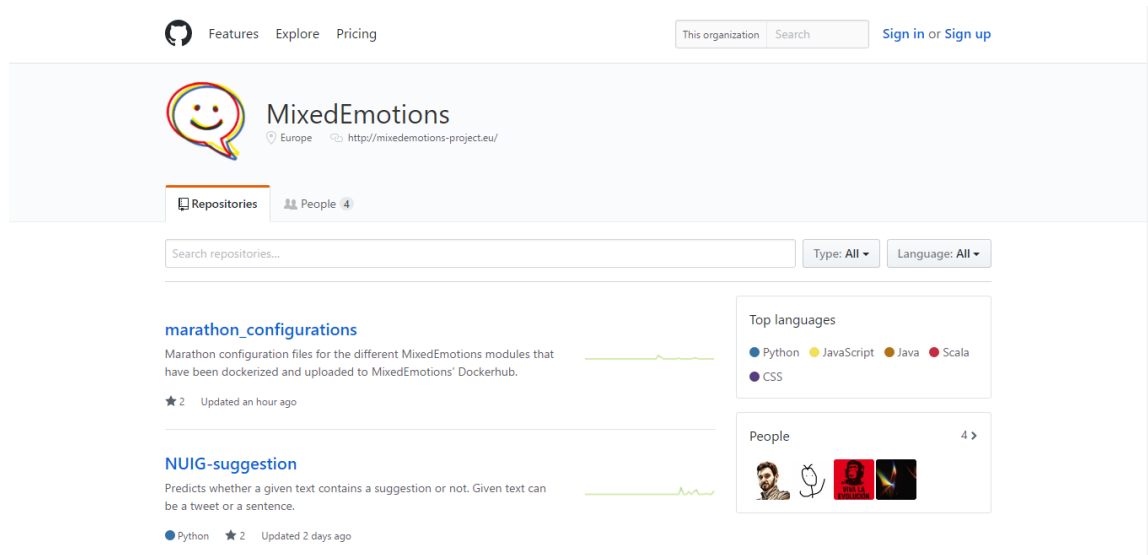
3 Engagement Activities

This section details the engagement activities performed during the 24 months of the project at Internet, End User and Open Source Communities level. Some of these activities overlap with the communication efforts described in D7.4 Communication Report, Final Version. Hence, this section only describes two types of engagement activities that are directly related to dissemination social coding and end-user dissemination.

3.1 Social Coding

One of the advantages of developing Open Source solutions and tools is that there are countless of online platforms that allow other developers to join your efforts and start using your code for free. This plays an important role in the dissemination strategy. GitHub is the biggest online code repository, popular among Open Source developers. The set of online tools and integration with other services make it a great and easy to adopt choice. Moreover, there is a vast community behind it, which is encouraged to fork and contribute on other projects.

Therefore, for MixedEmotions, a public GitHub account has been created at containing the software results of the project. The public code and documentation are available through our official GitHub account. GitHub users will find it easy to include our tools in their projects and contribute to MixedEmotions as easily as they contribute to their own projects. Using MixedEmotions tools comes with little effort and will potentially boost the promotion and growth of the project. The following illustration shows the current screencast of the MixedEmotions' GitHub account.



3.2 End user dissemination

The following table includes the public media events where members from MixedEmotions have participated during the 24 months of the project.

| Name | Partner | Description | Date |
|--|---------|---|--------------|
| Article in the university news website | UP | Article in German. "Projekt MixedEmotions: Den Emotionen der User auf der Spur" | Sep 25, 2015 |
| Article in Newspaper | UP | Article in German about research on emotions. "Emotionen als Forschungsobjekt" | Oct 8, 2015 |

4 Demonstration Activities

In order to make MixedEmotions accessible, a tutorial session was carried out during the SEMANTICs workshop on Sep 12, 2016. The aim of the session was to not only raise awareness on the activities within the project, but to showcase the MixedEmotions toolbox and the modules developed thus far. During the tutorial, all attendees were

guided through the process of downloading and using the open source tools that are a result of the project, using their own laptops and computers. In this aspect, the tutorial, together with the efforts in all the webinars that took place during the final months of the project, have replaced the original plan of a Hackathon contest during M24.

There were also several webinars on MixedEmotions platform: two business oriented webinars focussed on potential applications of the platform directed to a business audience and three technical webinars providing information on technical capabilities and deployment strategies.

A further demonstration of the MixedEmotions platform was presented at the in Dublin, March 2017. This event, organised by the Insight Centre for Data Analytics at Dublin City University, was attended by some 200 participants, approximately half of which were from various interested industry companies and organisations.

5 Conclusions

This document has presented a detailed view of the dissemination activities performed in the project. The strongest aspect of the dissemination efforts have been on both academic and industrial events and publications, which spanned the whole project. Firstly, on the awareness front, by informing about the project and its objective. Later on, on the engagement side, including publications and specific events, such as workshops. This has ensured that the project has a wide coverage in a multitude of academic and industrial venues. As a result, the popularity and results of the project, as well as the number of members in the user group have grown in the second half of the project. The last stage of dissemination has been spent mostly on demonstration aspects, including tutorials and, most notably, webinars. Overall, the dissemination activities in the project have fulfilled the original plan set in D7.5.