MULTISENSOR

Mining and Understanding of multilinguaL contenT for Intelligent Sentiment Enriched coNtext and Social Oriented inteRpretation

FP7-610411

D9.6

Final Dissemination Report

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Abstract

This deliverable contains the final overview of all dissemination activities pursued during the project lifetime. It starts out with a general overview of the originally planned activities, then goes into details about them, listing all actions performed and all KPIs including envisioned and met numbers. It concludes with a review of the actions and learnings for future projects.

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History

Version	Date	Reason	Revised by
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Executive Summary

This deliverable takes a close look at the dissemination activities performed in the MULTISENSOR project.

The document starts out by re-evaluating the envisioned dissemination strategy, reviewing target audiences, planned activities and foreseen materials as described in Deliverable D9.1 at the beginning of the project, to create a baseline for comparison of the activities.

It then goes into details on the actual dissemination activities as they were carried out during the project's lifetime. This means first reviewing the choices of channels and the use of the materials. Taking a closer look at the project website and the social media channels, namely Twitter, LinkedIn and Facebook, the deliverable describes in detail the general idea behind each channel and the content strategy used for each, before reviewing the success of these choices made and reflecting on a future use of each channel.

For the materials, namely the project presentation, the poster and the flyer, the deliverable contains the last version of each, as well as a description on how many iterations where made and why as well as the typical usage scenario of each item during the project.

Finally, the deliverable discusses all dissemination activities regarding their usefulness and success. Each chapter lists the items like scientific papers, code elements, datasets, presentation opportunities and workshops published/undertaken by the MULTISENSOR consortium and compares the envisioned KPIs, set at the beginning of the project, with the outcomes of the actions undertaken.

The deliverable concludes with a short review of the targets reached and the meaning for the project, including an overall evaluation of the usefulness of the activities as a guideline for future projects.

Abbreviations and Acronyms

ARD	Association of public service broadcasters in Germany
BMCO	Broadcast Mobile Convergence
DAML	DARPA Agent Markup Language
DID	Digital Item Definition
DII	Digital Item Identification
DRM	Digital Rights Management
EBU	European Broadcast Union
ETSI	European Telecommunications Standards Institute
IEEE	Institute of Electrical and Electronics Engineers
IP	Integrated Project
IPTC	International Press Telecommunications Council
IST	Information Society Technologies
JPEG	Joint Photographic Experts Group
MAF	Multimedia Application Format
MPEG	Moving Picture Experts Group
NITF	News Industry Text Format
NoE	Network of Excellence
OWL	Ontology Web Language
OWL-QL	Ontology Web Language Query Language
OWL-DL	Ontology Web Language Description Language
RDF	Resource Definition Framework
RSS	Really Simple Syndication
RT	Retweet
STREP	Specific Targeted Research Projects
W3C	World Wide Web Consortium
XML	eXtensible Markup Language
SWRL	Semantic Web Rule Language

Table of Contents

1 INTRODUCTION

A research project can only be successful, when its results are actually visible and reusable by others. While this implies of course that the results of the project have to be tangible, it also means that the wider public has to be informed about it. This requires a well thought through and managed dissemination strategy.

MULTISENSOR has set out three years ago with the aim to build a solution to handle large amounts of multilingual online information. At the same time, it was becoming part of this machinery of online content, by disseminating its results and its progress to the world through different dissemination activities and channels.

In the following chapters, these disseminating actions will be taken under close watch. The document starts out with a short review of what was planned in the beginning, taking a closer look at motivation and goals for these activities.

The deliverable will then go into the single activities to review and reflect on them. This means taking a closer look at the channels used for the dissemination as well as at the content and numbers produced during the last three years, highlighting what worked well and what could have done better.

The document concludes with an overall summary of the activities.

2 REVIEW OF DISSEMINATION PLAN

2.1 Overall Strategy

The basic strategy for the MULTISENSOR Dissemination was laid out in D9.1 – The Dissemination Plan. It described the general overview of the dissemination strategy including materials foreseen to fulfil the tasks envisioned for a successful turnout.

The basic principles of the dissemination plan were as follows:

- **Raise awareness** – let others know about the developments in the project
- **Inform** – educate the community
- **Engage** – get input/feedback from the community
- **Promote** – "sell" outputs and results

Target audiences

D9.1 stressed the importance of reaching out to the right audiences in order for people to benefit from MULTISENSOR. The project team therefore identified the different individuals, groups, and organisations and their specific interests in the project developments and set up the channels and activities accordingly.

The definition of a proper target audience was also taken in to account when choosing members of the user group as well as participants for the user evaluations.

In addition, MULTISENSOR knowledge and results was shared and exchanged with other European projects, with the scientific community and with standardisation bodies as these groups were all included in the target audiences.

Key messages

D9.1 also stated the necessity of defining a key message per target audience. This was taken into account when setting up the different channels and is reflected in the choices and messages distributed e.g. on twitter, LinkedIn or through the participation in certain scientific conferences

Timing of actions

Based on the experience from previous projects and partner's expertise the proper timing of actions was determined for all dissemination activates along the line. In D9.1 the project stated that the conveyed messages of MULTISENSOR have to be aligned with the circumstances of the project and the audiences.

For example, it is better to build a strong awareness of the project at the start, while focusing on "selling" achievements towards the end of it. It is also important to think about the communication timetable and requirements of the target audience. For instance, there are periods during the academic year, when it is difficult to reach academic staff (e.g. at the start of the term or during examinations).

This was taken into account when publishing to the blog or reaching out to expert groups for feedback on the work of MULTISENSOR. Also messages were sent out several times and through varying channels in order to increase the chances of reaching the target audiences.

2.2 Planned Dissemination Materials

In order to successfully promote the project through conferences, workshops, online channels and other means, a set of dissemination materials was foreseen in the DOW and planned and set up at the beginning of the project. These materials included the following

- **A project website**, to be set up in the first three months of the project and to run throughout the full length of MULTISENSOR plus two years beyond the project's termination.
- **A social presence** of MULTISENSOR in different social media networks.
- **A Communication kit** including **a flyer, a poster** and **an overview presentation**
- **A Fact sheet**, containing quick information on the project, useful for info booths at fares and conferences.
- A number of **press releases** on the project's work and progress
- A number of **Newsletter** editions with news items on MULTISENSOR's progress.

All of these items were created during the projects lifetime and will be discussed (and linked) in chapter 3.

2.3 Planned Dissemination Tasks & Events

Part of the dissemination strategy was also the participation in different events as well as setting up different channels and dissemination products, as stated before. The different dissemination methods planned to be exploited in MULTISENSOR are further detailed in Table 1 and Table 2.

Events	Products
• Scientific conferences and workshops • Trainings for scientist and/or regulatory body • Meetings • Open days • Stands and demonstrations • User days • Seminars and webinars	• Articles in peer-reviewed journal • Videos • Newsletters • Website • Research summary sheets • Best practice guides • Leaflets, brochures, posters • On-line demo versions • Local press announcements/releases

Table 1: Dissemination methods: Events vs. Products

In Table 2 every method is attributed a purpose as well as a short description of what kind of action was to be expected here in order to make it successful.

Method	Purpose	Hints and Tips
Institution newsletters	• Awareness • Inform	Use the (PIMEC) newsletter to announce the project, give regular updates, develop a profile, and get buy-in from the targeted audience. For example, include an interview with your project 'champion', some quotes from end users, or praise from an external evaluator. Make sure that your target audience knows that the project is a success.
Project web site	• Awareness • Inform • Engage • Promote	The project web site is one of the most versatile dissemination tools. Put plenty of information there for different audiences. Add to it regularly so people keep coming back. Sell the project and engage the community.
Press releases	• Awareness	Press releases should be issued to announce important achievements publicly.
Flyers/brochures	• Awareness	Printed flyers can very helpful in rising interest of people at conferences etc. They can be handed out easily to people passing by or to colleagues at partnering institutions. The electronic version (e.g. PDF file) can also be circulated via website or social media.
Projects meetings	• Engage	Projects (and cluster) meetings are excellent opportunities for projects to learn from each other, discuss common issues, and get feedback on the work of every project partner.
Conference presentations	• Engage • Promote	National and international conferences are an important opportunity to share project achievements with experts in the field. Suitable conferences with high impact will be selected, attracting the experts' attention.
Conference posters	• Engage • Promote	Posters are an excellent way to get people's attention and engage them in a discussion about the project gauge their reactions, and get one-to-one feedback.

Method	Purpose	Hints and Tips
Workshops	• Engage	Workshops, as small interactive events, can be used to get feedback from users on a demo or from experts on a particular issue. The focus should be on discussion to further future development.
Stands & Demonstrations	• Engage	Demonstrations allow showing project developments and getting feedback. Demos are useful early in the project to get feedback from stakeholders on functionality, usability as well as look-and-feel.
Online discussion lists	• Awareness • Inform • Engage	Email lists are useful for discussing new developments, problems, and issues. They are an opportunity to be proactive and reactive, when used to share learnings with the community and develop a profile for the project. We may join a number of lists in relevant areas. Email lists can also be used for announcements, e.g. an achievement, something new on the project web site, or an upcoming project event. During the project we may also want to contribute to electronic newsletters.
Journal articles	• Inform	Opportunities to get articles about the project published should always be seized as they offer a great way to attract more community members.
Case studies	• Inform	Case studies are good for explaining the progress reached up to a certain point as well as key findings from the project so others can benefit from the experience.
Reports and other documents	• Inform	Reports and other documents provide details or intermediate results that are not integrated in the project deliverables. Intermediate report can be used to disseminating intermediate results of the project and keep people interested.

Method	Purpose	Hints and Tips
User days	• Engage	Open days target the following objectives: (i) To demonstrate the prototypes to potential users, (ii) To enhance the objectives of the project, (iii) To discover use-cases that haven't been considered, (iv) To evaluate experimental techniques, (v) To look and comment on the results, and (vi) To provide feedback for improvements.
Open days	• Engage	The objectives of these events are: (i) To present MULTISENSOR results and illustrate them by demonstrations, (ii) to offer the interested parties the possibility to experiment with MULTISENSOR's workbench, (iii) To provide a user forum for networking with professionals working in related areas, (iv) To obtain feedback from the participants.
Seminars and Webinars	• Awareness • Inform • Promote	The objective of seminars and webinars is to promote the techniques and tools developed in the project both in the academic and the industrial community.
Link promotion	• Awareness • Promote	The goal of this method is to promote MULTISENSOR through the sites of other public institutions, academic organisations and private initiatives using their navigational tools, their user community tools, their contents, banners and ads, etc.

Method	Purpose	Hints and Tips
Public platform-based dissemination	• Awareness • Inform • Promotion • Engage	This type of dissemination aims at publishing short definitions, videos and presentations of MULTISENSOR in public world-wide accessible platforms like YouTube, Wikipedia, Joinup, etc.

Table 2: Dissemination methods - details

2.4 Planned Dissemination KPIs

In order to better plan and execute the dissemination tasks as well as making the success of the activities measurable, MULTISENSOR set itself certain KPIs, meaning benchmarks, for certain tasks. These KPIs ranged from specific numbers of events, meetings or conference participations to the number of visitors to the website. In the following you find an overview of what KPIs were set in the beginning of the project including a description of why they matter. The numbers themselves will be listed and discussed in the evaluation chapter.

Type of Action	Description	Target
Joint Workshops	Conduct joint workshops in cooperation with the EUMSSI project, to learn from each other, give and get feedback and evaluate the other's solution.	Two joint workshops throughout the projects' lifespan, with 30-40 participants respectively.
Initiatives, Events and Conferences	Present the project's work and progress to and make MULTISENSOR known among the different target audiences, interact and get valuable feedback and input.	Participation in 3 cluster events and/or standardization initiatives each year, 9 in total
Meetings with related projects	Learn from other projects, share ideas and knowledge, make MULTISENSOR known throughout the ICT community	Three meetings/year with related ICT projects during the project lifetime, 9 in total
Press Releases	Announce project work and regular updates to the press for broader coverage and reach of broader community of interested people.	At least 1 press release per year, 3 in total

Type of Action	Description	Target
Newsletters	Keep interested parties updated on the status of the project in regular intervals, including announcements of events and other milestones.	Send a total of 18 news items, 6 per year in PIMECs newsletter (at least every 3 months)
User Days	Present the project to envisioned end users from the target audiences, to increase awareness, involvement and get direct feedback on prototypes.	2 MULTISENSOR User Days with at least 30 at least each
Open Door Days	Similar to the user days, but with the possibility to include users on a voluntary basis, allowing people to join freely to learn more about the project's work.	2 MULTISENSOR Open Door Days with 50 participants for each Open Door Day
Demonstrations	Present the project and the progress to target audiences and experts to increase interest and get immediate feedback	Demonstrations of MULTISENSOR platform to 20 participants in total
MULTISENSOR Project presentation	Exchange with likeminded projects for networking purposes and feedback on the project's direction and progress.	Project presentation to 10 consortia during the project lifetime.
Website traffic	Create awareness for the project's work, its progress and grow an interest in MULTISENSOR through a working and appealing website	25% growth in website traffic every year

Table 3: KPIs set for the project's dissemination activities

There were no KPIs set for the social media channels, so there is no comparative base line. But we will discuss the final number of followers, likes and connections in the section of social media activities.

3 SUMMARY OF PERFORMED DISSEMINATION ACTIVITIES

3.1 MULTISENSOR Promotion Materials

The promotion materials for MULTISENSOR were produced in the first months of the project. They were mainly set up by the project's coordinator CERTH and the partners for dissemination activities, pressrelations (in charge of WP9) and Deutsche Welle. In the following, all materials will be separately presented including their usage and the success.

3.1.1 Presentation

The project presentation is a pre-prepared slide-deck ready to use for all partners involved in the project. Its aim was to give a standardised overview of the project and it was ready to use for everyone presenting MULTISENSOR to a new audience. The idea was to have a common baseline covering all necessary details, so partners could focus their efforts on their particular modules.

The presentation hence covered the general basis of the project like the details on the FP7 funding, the partners involved in the project and technical schema as well as the basic Use Case descriptions and progress of the project.

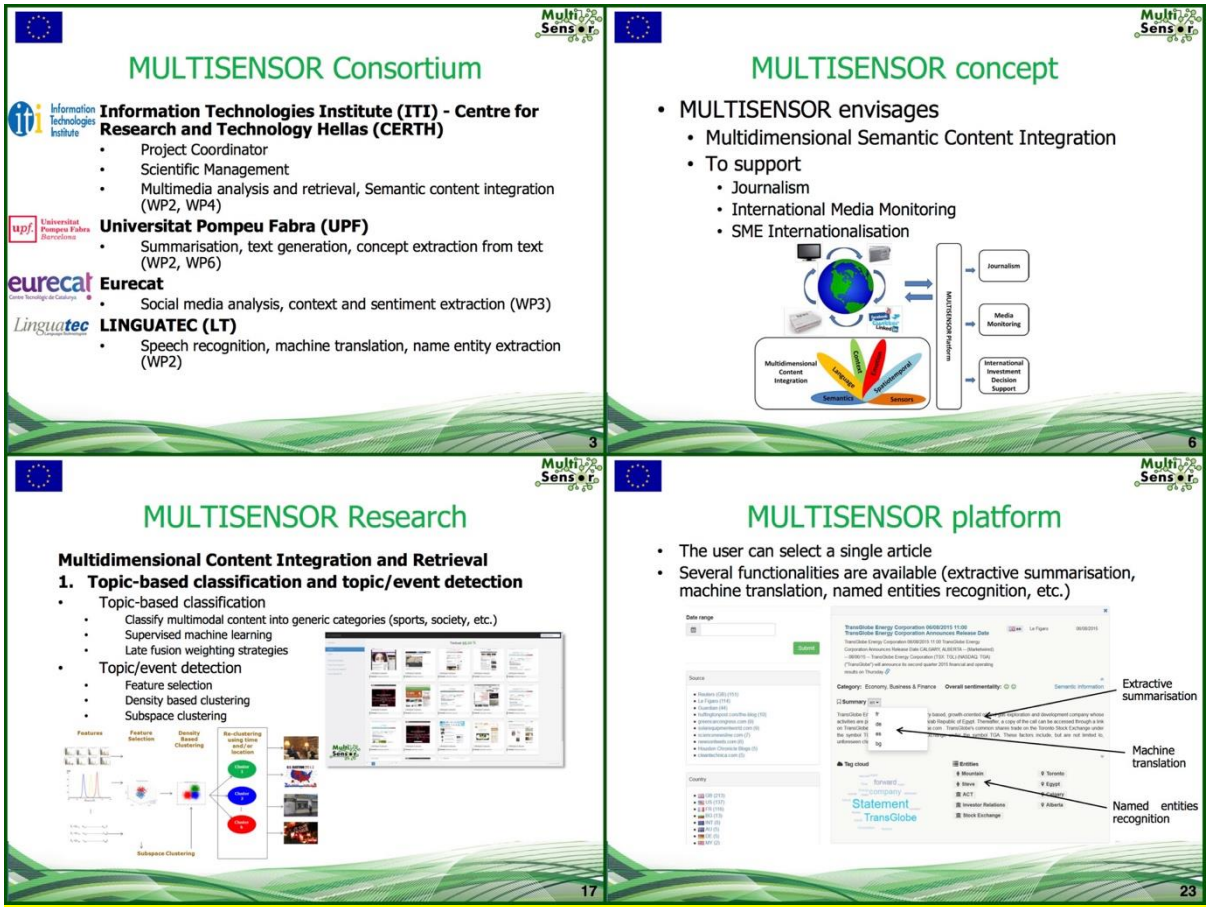

Figure 1: Example Slides from the MULTISENSOR project presentation

The presentation and all updated versions were available to all partners as PDF and PPT via the project wiki.

The presentation was updated twice during the project's lifetime, to reflect on the progress of the project, the developed technical modules, the overall prototype and changes in the consortium (change of name of one of the partners). It was put to use during the presentations for other projects, as well as an intro for the demonstrations to partners, other projects and at conferences as listed in chapter 3.6 .

3.1.2 **Poster**

The poster is a large-scale overview sheet to present the idea of the MULTISENSOR project[1]. It highlights key aspects of the project, from the overall idea of MULTISENSOR and the problem it aims to solve, to the practical use cases, the technical set up as well as the set-up of the project consortium.

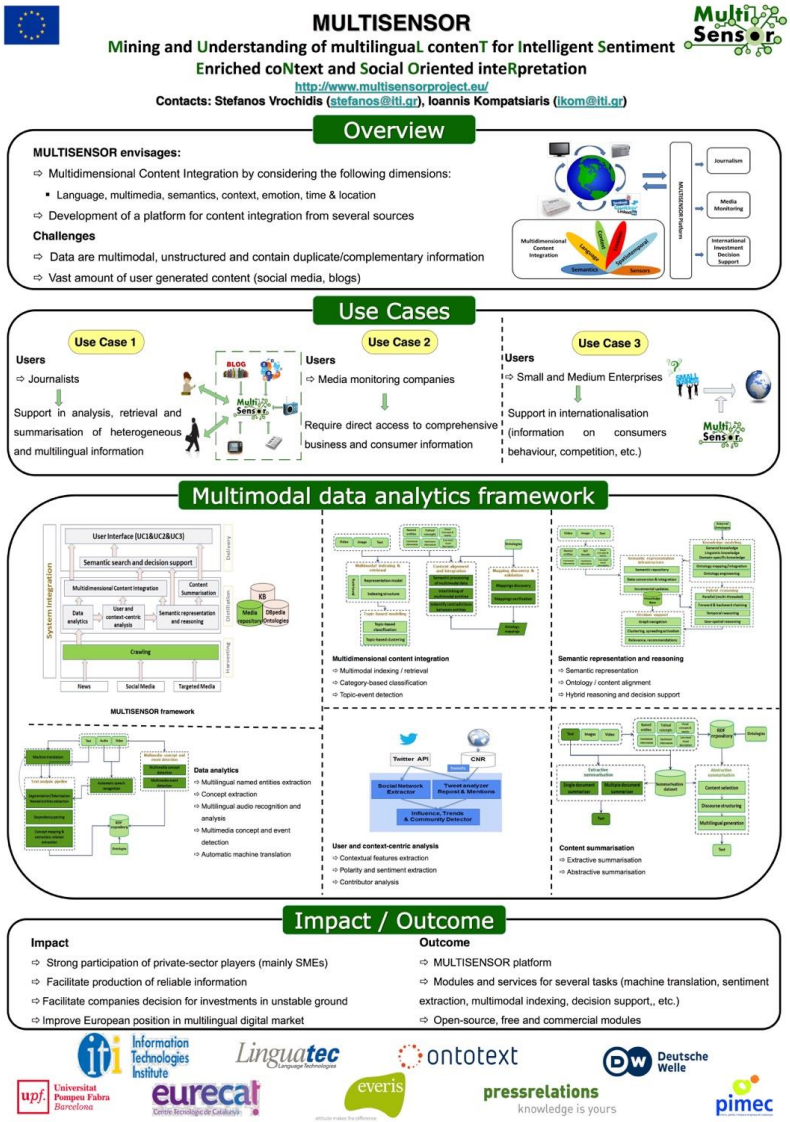

Figure 2: Last version of the MULTISENSOR project poster

[1] http://www.multisensorproject.eu/achievements/publications/ - under the tab Presentations

The poster was used for different types of events, mainly conferences and user workshops were MULTISENSOR was present with a booth. The poster would be there to attract people, to get a brief overview and for representatives of the project to quickly showcase the details of the project, giving the possibility to indicate certain aspects of the project without just describing them.

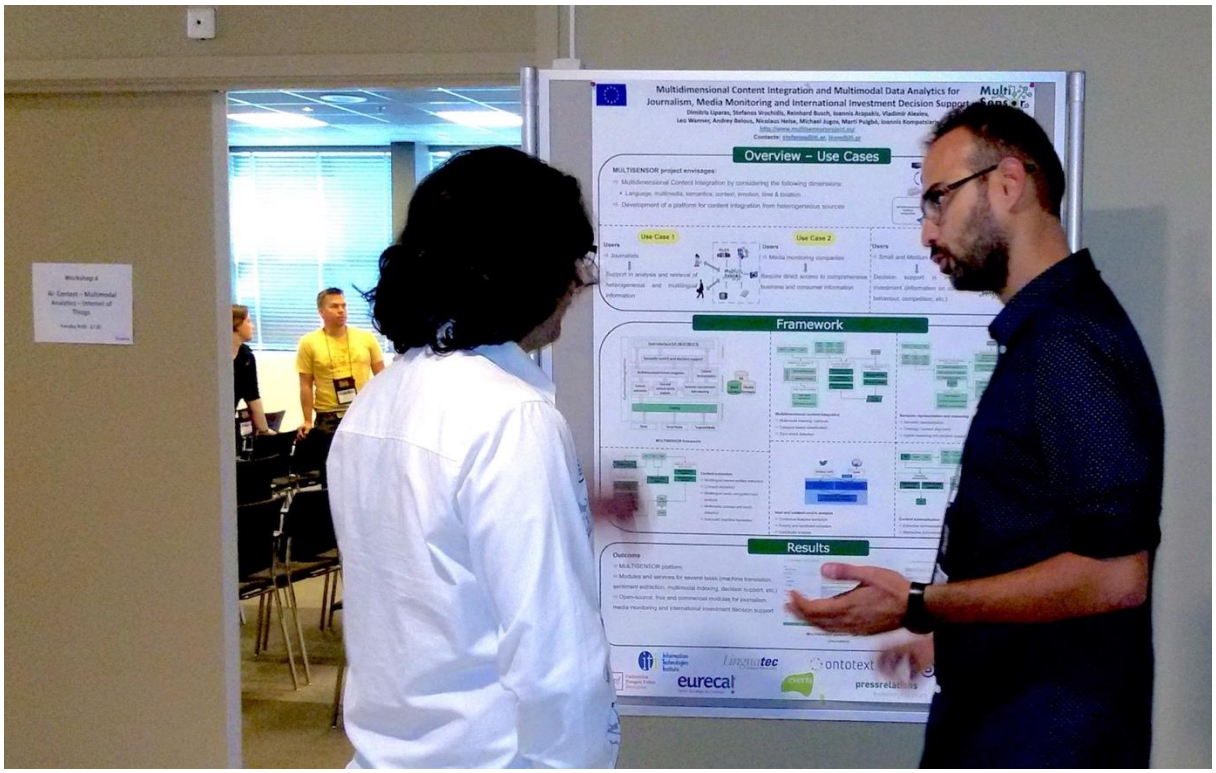

Figure 3: MULTISENSOR Poster in use at a workshop

The initial draft of the poster was updated twice during the project's lifetime, once to reflect the development of the technical infrastructure of the project and once to incorporate changes in the consortium.

At a later stage of the project, the standard poster was complemented by additional versions, designed by partners individually, covering selected technical items, such as the summarisation process. These posters were especially put to use at the user days to be better able to explain technical aspects in detail.

3.1.3 **Flyer**

MULTISENSOR designed a flyer[2] in combination with the poster that was aiming for giving interested audiences the possibility to take some information with them and read more about the projects work. Similar to the poster, the flyer contained information on the idea, the technical solution, the uses cases and the overall set-up of the project. However, the flyer was designed with more background information available. This was to make sure that people could read-up on things they had seen on the poster or heard from the presentation.

[2] http://www.multisensorproject.eu/wp-content/uploads/2015/11/Multisensor_Flyer.pdf

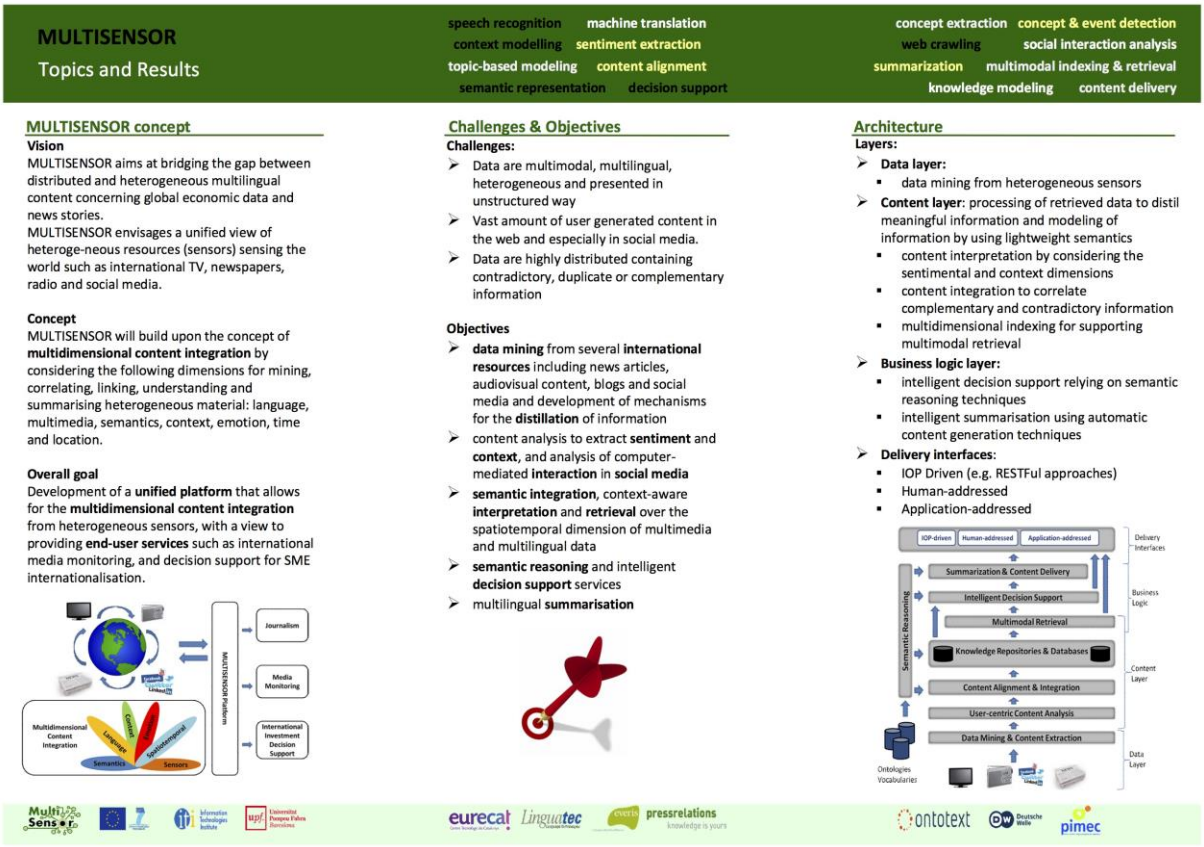

Figure 4: Front page of the last version of the MULTISENSOR project flyer

The flyers were used throughout the project's lifetime for conferences, workshops, user days and all other face-to-face meetings with users, experts and other target audience members.

The flyer was also updated several (4) times during the project's lifetime. The changes were made to reflect the progress in the project. The larger number of changes to the flyer (in regards to the poster and presentation) is the larger number of details available in the flyer.

3.2 Project Website

In order to create a continuous stream of information for interested audiences as well as have a one-stop-place for people to go to and find out more about the project, MULTISENSOR set up a project website[3]. This central hub was used to promote different aspects of the projects work and progress. It was continuously updated with articles and information about the project. Figure 5 shows the complete website shortly before the official and of the project. The details, strategy and success of the website will be discussed in the following chapter.

[3] http://www.multisensorproject.eu/

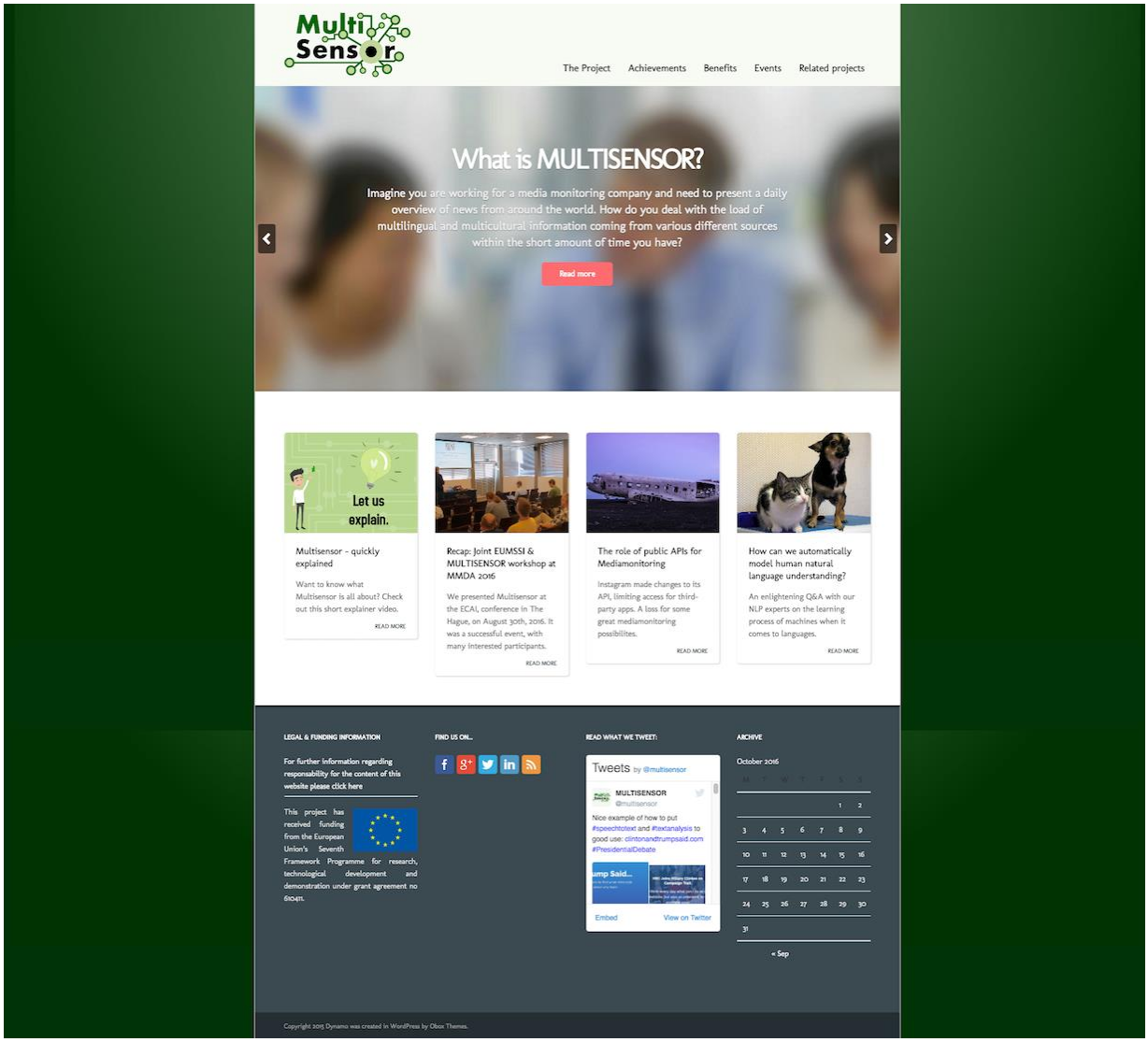

Figure 5: MULTISENSOR Project Website

3.2.1 **Overview**

The website was set up consisting of four main sections:

- **The blog**, which was used to post updates, in-depth stories and detail descriptions on the work in MULTISENSOR

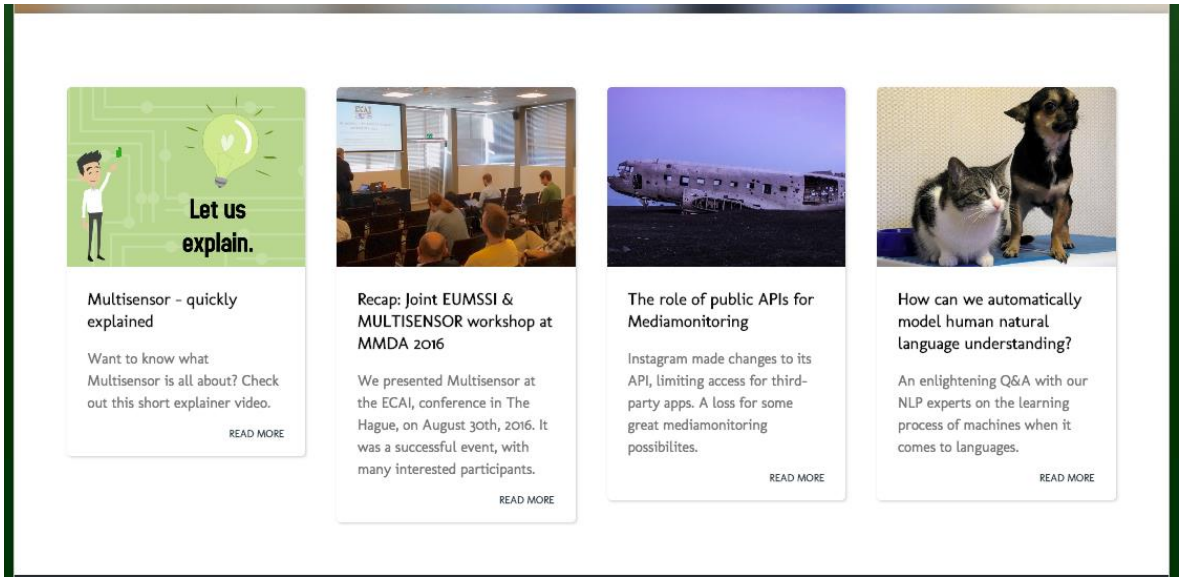

Figure 6: The Blog section of the Project's Website showing the four most recent items

- **The Banner**, which served to offer a general intro to the project and the content available, but also helped to promote specific items, e.g. on the User Days

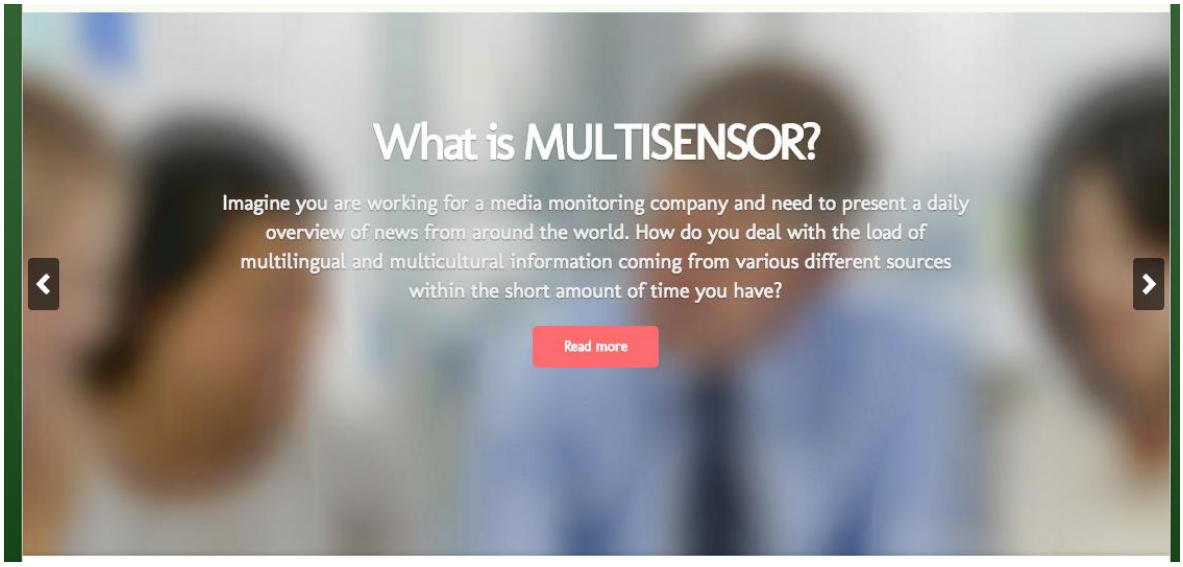

Figure 7: The Banner of the Project's Website

- **The in-depth menu**, with lead users to more detailed information on the project, the public deliverables, the project's publications as well as the project's results and the demonstrators.

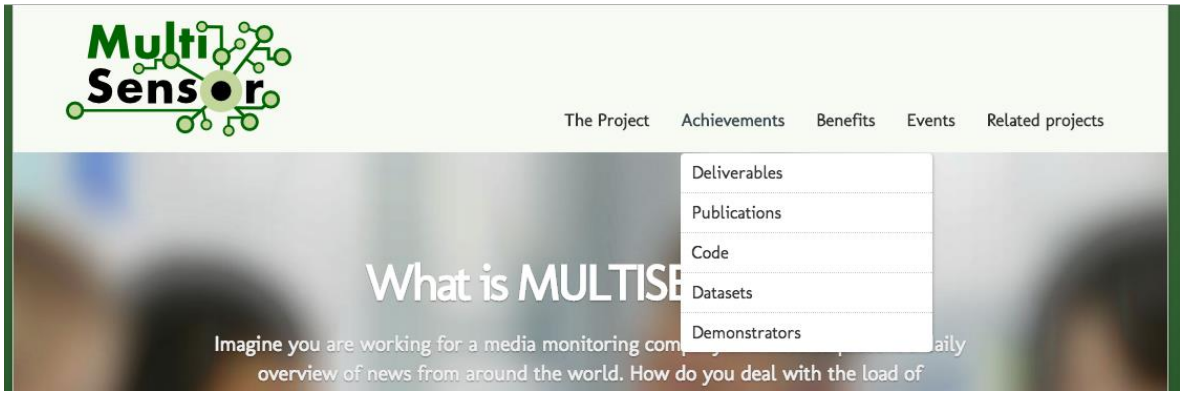

Figure 8: The in-depth menu of the Project's Website

- **The Footer** of the page was furthermore used to give basic information about the project's funding background, and link to the project's twitter-account.

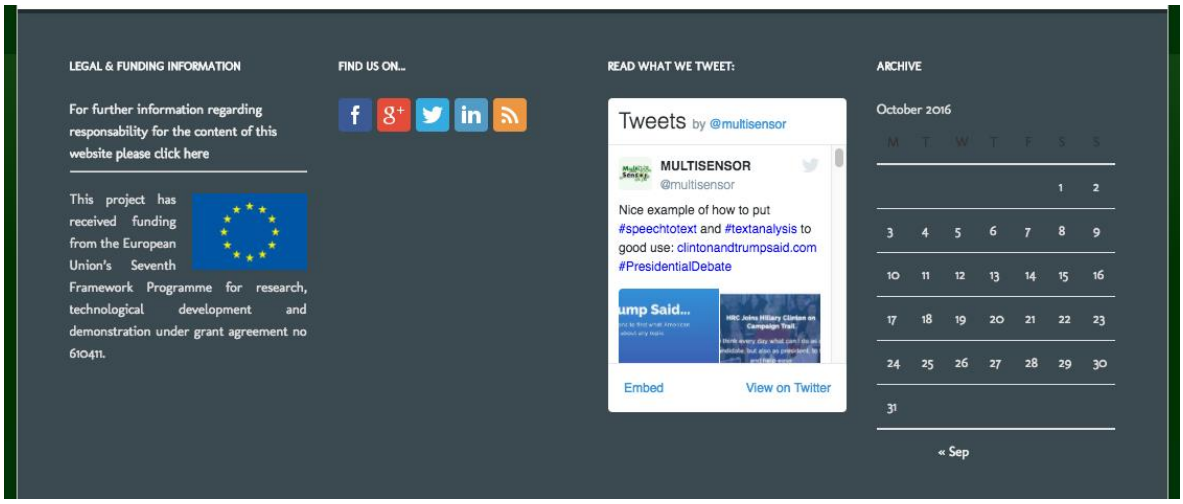

Figure 9: The footer of the Project's Website

3.2.2 **Content**

As the blog was supposed to function as a first entry point for people interested in the work of MULTISENSOR as well as a central point of information about the progress, different content with different schedules was foreseen and posted for the different sections.

The Blog

The blog was mainly used for in depth stories on the MULTISENSOR key research as well as related research aspects. In order to have a continuous stream of new and interesting insights, as well as in order to cover the main aspects from an expert point of view, all partners contributed to these stories following a pre-defined schedule shared via the project's Google drive.

Website Content Plan

Year 2015

		February 2015	March 2015	April 2015	May 2015	June 2015
Deadline		25/02/2015	25/03/2015	28/04/2015	27/05/2015	24/06/2015
Editor		**Certh**	**Linguatec**	**BM-Y!**	**Onto**	**UPF**
Reviewer		*BM-Y!*	*PIMEC*	*pressrelations*	*Everis*	*Certh*
Topic:		*New technologies in the light of a European crisis*	*Machine Translation - between dream and reality*	*The Influence of Indirect Ties on Social Network Dynamics*	*The art of querying multimedia and geospatial data*	*What we say and how we say it*

	July 2015	August 2015	September 2015	October 2015	November 2015	December 2015
Deadline	29/07/2015	26/08/2015	24/09/2015	28/10/2015	25/11/2015	18/12/2015
Editor	**Everis**	**pressrelations**	**PIMEC**	**Certh**	/	/
Reviewer	*Onto*	*Linguatec*	*UPF*	*BM-Y!*	/	/
Topic:	*Benefits of language technologies in Public Sector*	*Automatic text summarization and media monitoring*	*- please fill in topic -*	*- please fill in topic -*	/	/

Year 2016

	January 2016	February 2016	March 2016	April 2016	May 2016	June 2016
Deadline	27/01/2016	24/02/2016	25/03/2016	27/04/2016	25/05/2016	24/06/2016
Editor	**Linguatec**	**BM-Y!**	**Onto**	**UPF**	**Everis**	**pressrelations**
Reviewer	*PIMEC*	*pressrelations*	*Everis*	*Certh*	*Onto*	*Linguatec*
Topic:	*Named Entities Recognition: "Who Am I and If So How Many?"*	*The Wisdom of Crowds: Sentiment and Named-Entities*	*- please fill in topic -*	*Challenges in text summarization*	*Architecture comparison between text analysis systems*	*- please fill in topic -*

	July 2016	August 2016	September 2016	October 2016	November 2016	
Deadline	27/07/2016	26/08/2016	27/09/2016	26/10/2016	23/11/2016	
Editor	**PIMEC**	**Certh**	**Linguatec**	**BM-Y!**	**Onto**	
Reviewer	*UPF*	*BM-Y!*	*PIMEC*	*pressrelations*	*Everis*	
Topic:	*- please fill in topic -*	*- please fill in topic -*	*Automatic speech recognition for media mining*	*- please fill in topic -*	*- please fill in topic -*	

- Every partner writes one article per month on a topic of their choosing - related to MULTISENSOR.
- Articles should be about 500-800 Words long, include at least one fitting cover picture and be written for a general audience

Figure 10: The Content Plan for the Project's Website

The schedule (as can be seen in Figure 10) foresaw one story per month, written by one and reviewed by another project partner, in order to keep articles focused but also understandable for a more general audience. With a few exceptions due to other project priorities and vacation times, this set up worked quite well and brought a number of readers to the website.

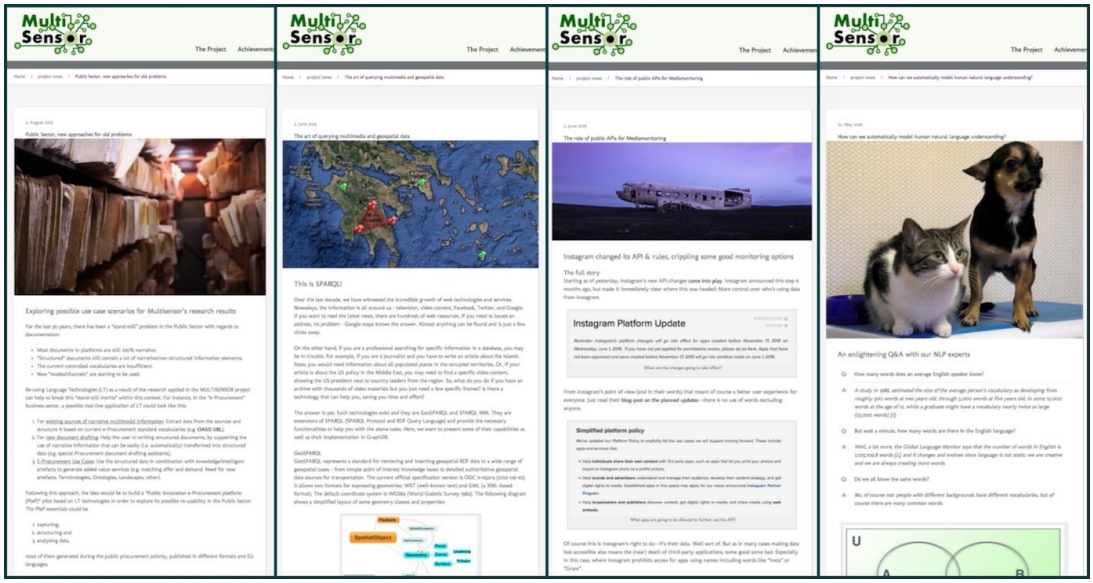

Figure 11: Examples of Articles posted to the MULTISENSOR Website by Consortium Members

In order to keep people's interest up in-between these articles, Deutsche Welle, as the responsible partner for the website, also published curated overviews of related research, short in depth pieces on specific related topics and reviews of project events.

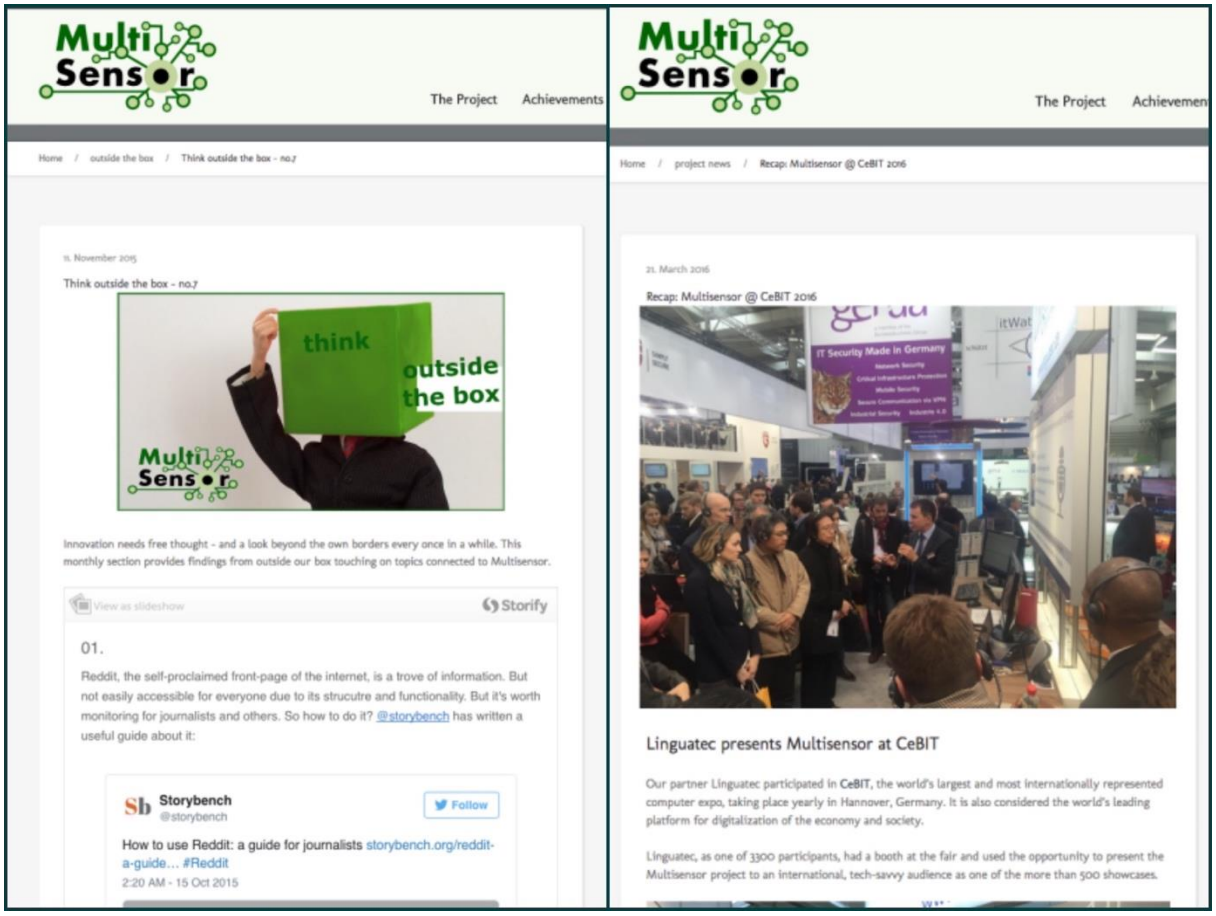

Figure 12: Examples of postings in-between articles, covering research topics and current events

The Banner

The main part of the Banner was set up once with two slides functioning as a general introduction and welcome message for visitors to the site. A third slide was used to invite people to participate in the project via the user group. Additionally, one slide always served as a teaser for the most current article, while one or two slides were used flexibly as additional variable teasers for events, such as the joint user days with the EUMSSI project or the Workshop at ECAI2016.

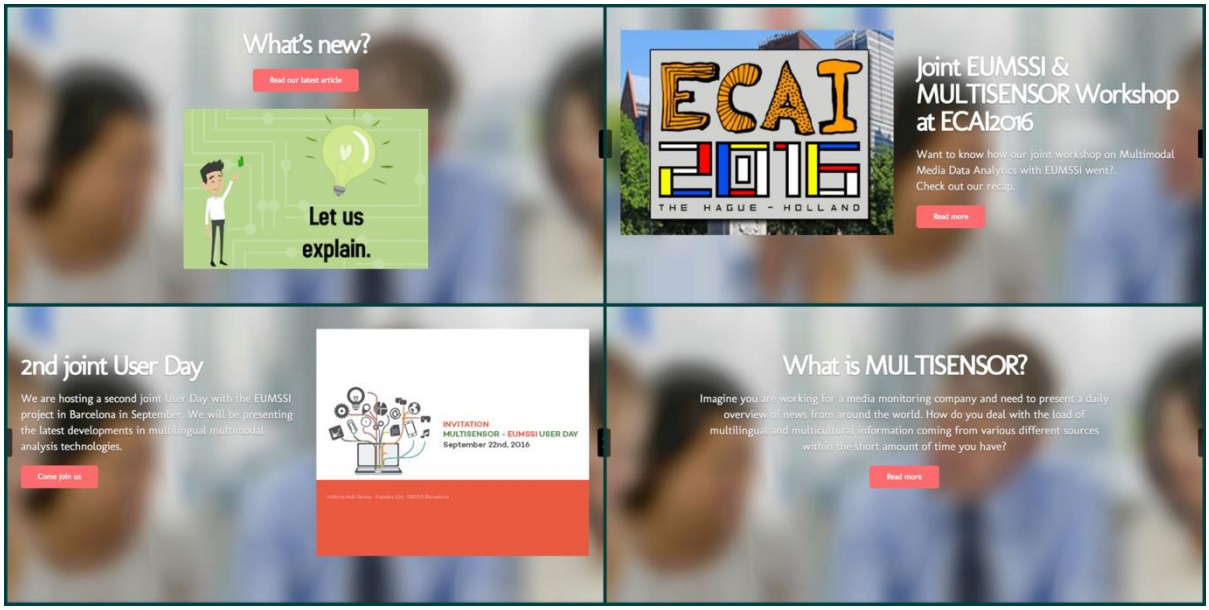

Figure 13: Examples of the slider images on the MULTISENSOR Website

The in-depth menu

For people interested in more details about the work of MULTISENSOR, the in-depth menu was set up with several layers. These layers contained everything from more details on the project's history and set up (like partner's involved, work package structure and general idea behind MULTISENSOR) to related research projects.

Very important in this regard was the subsection of achievements, listing the following elements:

- Public Project Deliverables
- Publications
- Code
- Datasets
- The Project demonstrators

These elements will be separately discussed in chapter 3.5 , with a closer look at what was publicised and how many people actually interacted with this data.

3.2.3 **Statistics**

As said before, the website was setup as a central hub for the project to publish information about the work. It served as a reference for people at conferences to find more information about the project, the partners involved and the progress as well as a way to get in touch with the consortium to talk about MULTISENSOR and the research done in the project. It was hence important to us to keep the information updated and at hand for everyone coming to the page.

Looking at the numbers, it clearly shows that there was an interest in the project and the information published on the website. Overall, throughout all three years, the website reached a total of around **11.000 visits**, accumulating to a total of **43.658 page views** (32.959 unique) with an average duration of around **4 minutes** (as can be seen in Figure 14).

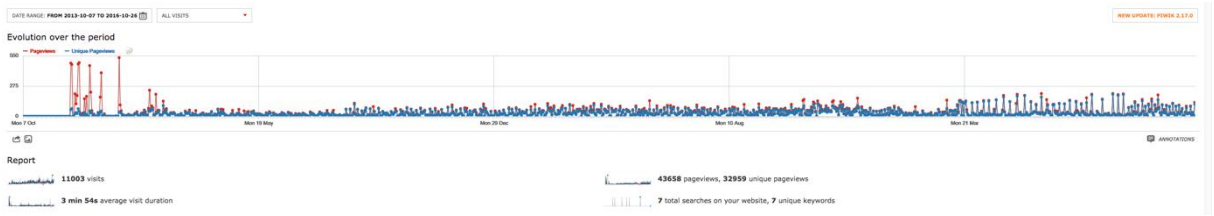

Figure 14: Overview of Page Visits across the full project length

Breaking this down for every year (see Figure 15), we can see that the overall numbers per year were growing, slowly, but surely:

- During the first year, the blog had a total of **2067 visits**, leading to a total of about **11.400 page views** (~5650 unique).
- During the second year, the blog received about **3950 visits** (increase of about **91%** compared to year 1), resulting in roughly **13.900 page views** (11.600 unique).
- Year three saw a decline in growth, but still got about **5040 visit**s (increase of ~**28%** compared to year 2), with a total of about **18.400 page views** (~15.750 unique)

As stated in chapter 2.4 , the goal for the website was to reach an increase of visitors of 25% per year, which the project managed quite well. The differences in growth between the years is probably due to the fact that there were more articles and small research items on display in year two than in year three, which was focused mainly on improving and finishing the prototype of the project. Still the numbers show, that the interest in the project's work was still big and people kept coming back to learn more.

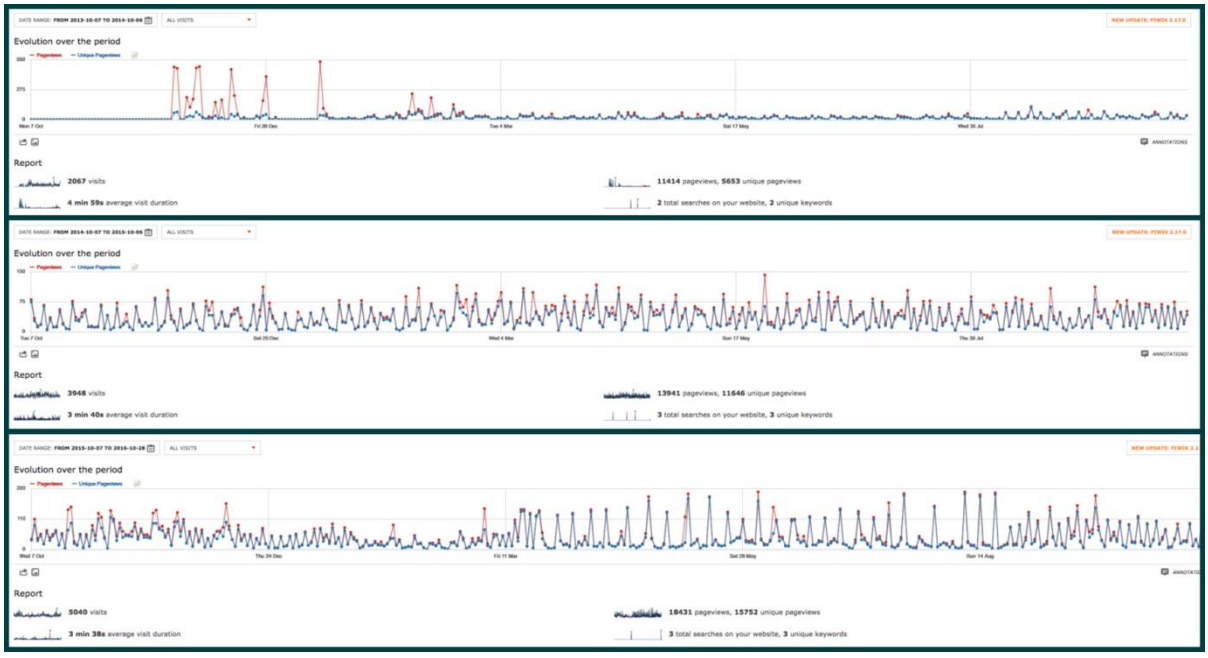

Figure 15: Comparison of page visits between Year 1, Year 2 and Year 3

This can also be seen by looking at the number of downloads during the three years:

- Year 1: **111 Downloads**
- Year 2: **329 Downloads**
- Year 3: **391 Downloads**

While the website didn't have much to offer in year 1, year 2 and year 3 added a lot of interesting elements to the website, available for the public. Deliverables about technical concepts and user evaluation, as well as code elements and datasets attracted new and reoccurring visitor.

Both assumptions are also backed by the ranking of visited sites. Looking at the most visited sites for the whole project duration clearly shows a lot of interest in the general project pages (MULTISENSOR in short, partners, Want more details,), as well as the pages offering information to download, such as the code or deliverables or publications (see Figure 16).

Page Titles

PAGE NAME	PAGEVIEWS	UNIQUE PAGEVIEWS	BOUNCE RATE	AVG. TIME ON PAGE	EXIT RATE	AVG. GENERATIO TIME
Multisensor Project EU	10146	6959	52%	1 min 6s	62%	0.99s
MULTISENSOR – in short | Multisensor Project EU	2861	1967	51%	1 min 24s	42%	0.55s
Partners | Multisensor Project EU	1950	1139	46%	1 min 19s	28%	0.52s
Deliverables | Multisensor Project EU	1605	1111	70%	1 min 44s	40%	0.72s
Want more Details? | Multisensor Project EU	1133	888	60%	1 min 19s	26%	0.65s
Related projects | Multisensor Project EU	972	792	53%	1 min 21s	36%	0.73s
Publications | Multisensor Project EU	873	651	57%	1 min 41s	26%	0.91s
Code | Multisensor Project EU	786	589	50%	1 min 31s	28%	0.55s

Figure 16: Ranking of most visited pages for whole project duration

Taking a look at the three years in comparison, you can see how pages like "code" move from not being on the list to the top places in year 2 and year 3. Similar things happen with pages like "deliverables" or "publications", while "MULTISENSOR – in short" stays very much on top and other "info" pages move further down in the ranking.

Page Titles

PAGE NAME	PAGEVIEWS	UNIQUE PAGEVIEWS	BOUNCE RATE	AVG. TIME ON PAGE	EXIT RATE
Multisensor Project EU	2839	1505	43%	1 min 55s	57%
MULTISENSOR – in short | Multisensor Project EU	821	475	34%	1 min 41s	35%
Partners | Multisensor Project EU	931	344	39%	1 min 56s	27%
Related projects | Multisensor Project EU	366	240	52%	1 min 19s	46%
Deliverables | Multisensor Project EU	533	228	36%	2 min 8s	21%
Want more Details? | Multisensor Project EU	354	210	50%	1 min 50s	25%
Events | Multisensor Project EU	335	177	36%	1 min 23s	23%
Who's behind it? | Multisensor Project EU	257	160	42%	55s	22%
Project structure | Multisensor Project EU	171	130	60%	1 min 9s	20%
Use Cases | Multisensor Project EU	255	129	56%	3 min 4s	33%
Publications | Multisensor Project EU	221	127	50%	1 min 24s	12%

Page Titles

PAGE NAME	PAGEVIEWS	UNIQUE PAGEVIEWS	BOUNCE RATE	AVG. TIME ON PAGE	EXIT RATE	AVG. GENERA TIME
Multisensor Project EU	3670	2806	58%	47s	66%	0.95s
MULTISENSOR – in short | Multisensor Project EU	1095	770	55%	1 min 14s	43%	0.58s
Partners | Multisensor Project EU	606	455	49%	58s	27%	0.46s
Deliverables | Multisensor Project EU	549	448	70%	1 min 47s	38%	0.69s
Want more Details? | Multisensor Project EU	467	395	64%	1 min 9s	30%	0.5s
Related projects | Multisensor Project EU	344	320	56%	1 min 1s	28%	0.57s
Publications | Multisensor Project EU	351	287	49%	1 min 45s	23%	1.26s
Events | Multisensor Project EU	313	274	80%	35s	14%	0.36s
Project outcome | Multisensor Project EU	275	250	77%	43s	11%	0.63s
Project structure | Multisensor Project EU	289	250	70%	1 min 21s	12%	0.7s
Use Cases | Multisensor Project EU	372	248	72%	1 min 26s	26%	1.21s
Code | Multisensor Project EU	301	247	44%	1 min 4s	21%	0.66s

Page Titles

PAGE NAME	PAGEVIEWS	UNIQUE PAGEVIEWS	BOUNCE RATE	AVG. TIME ON PAGE
Multisensor Project EU	3637	2648	51%	58s
MULTISENSOR – in short | Multisensor Project EU	945	722	59%	1 min 23s
The Influence of Indirect Ties on Social Network D...	536	487	90%	41s
Deliverables | Multisensor Project EU	523	435	74%	1 min 29s
Partners | Multisensor Project EU	413	340	54%	1 min 11s
Machine Translation – between dream and reality | ...	331	308	86%	40s
Want more Details? | Multisensor Project EU	312	283	57%	1 min 10s
Code | Multisensor Project EU	326	253	51%	2 min 12s
Publications | Multisensor Project EU	301	237	65%	1 min 45s
Related projects | Multisensor Project EU	262	232	52%	1 min 50s

Figure 17: Comparison of the page ranking across all three years from 1 - 3

3.3 Social Network Activities

In order to reach out to more people and make itself available for other audiences beyond the ones reached through the website and personal meet ups, MULTISENSOR also set up

several social media channels. These channels were used in different ways and with different frequencies, leading to different results in the numbers of visitors and interactions. The main channels chosen for distribution were Twitter, LinkedIn and Facebook, however in the daily use these were not the only tools from the social media set put to use. Others, like IFTTT or YouTube or Storify where set up as well and used a support for the other channels. The following chapters focus on the usage of the main channels, describing their use and discussing user numbers and success of the usage.

3.3.1 Twitter

Setup, Strategy and Content

With its all-open set up, Twitter is an ideal tool for open communication. Messages can be read by anyone, even without owning a twitter account, they can be re-used by embedding them in websites and other publications, and they can be reshared, liked and responded to, by practically anyone. The structure of the network allows for sharing brief updates, distributing interesting findings and links to one's own project. Probably the most valuable aspect is the fact, that Twitter with its over 300 Million users, allows to reach an audience well beyond just a scientific one, well beyond your own borders in no time, making it a very valuable marketing tool, especially when it comes to projects like MULTISENSOR.

Figure 18: The MULTISENSOR Twitter Channel

The MULTISENSOR Twitter Channel[4] was set up before the official start of the project (May 2013) under the username **@multisensor** and started tweeting regularly once all dissemination materials, including website and project logo, were set up and ready to go (January 2014).

The three main types of messages sent out, were

- To share project news and promote new items on the project website
- To highlight and promote interesting articles, tools and news from the research field

[4] https://twitter.com/multisensor

- To live report from workshops, meetings and conferences, MULTISENSOR was attending/holding

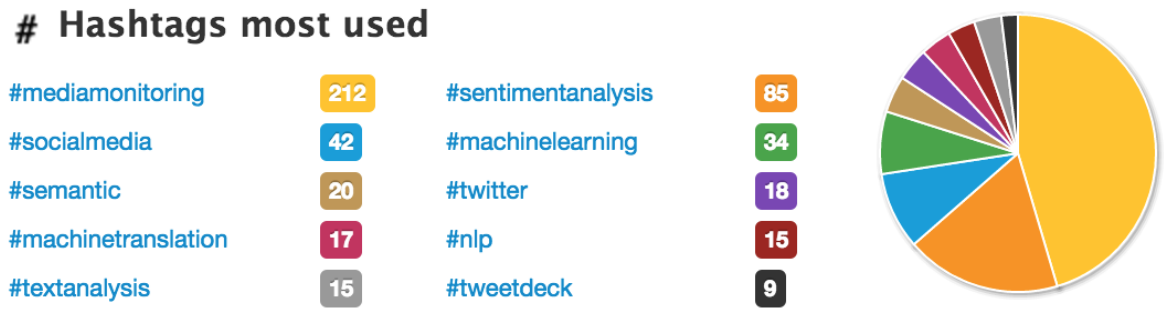

Figure 19: Overview of the main topics covered on the Twitter channel

Most of the tweets covered the research topics from the project, as can be seen in Figure 19, showing the most used hashtags on the Channel.

The majority of the tweets was sent out manually via the twitter website, Tweetdeck or the Twitter App (during live-events). Sometimes tweets were pre-scheduled using tools like buffer[5], Tweetdeck's scheduling feature and later a self-made Twitter-scheduler to ensure a continuous stream of messages, to keep people aware of the channel, even in busy times, when the project couldn't check for new things on a daily basis. This kind of pre-planned tweeting is nothing new to the industry and done by many companies.

The channel was closely monitored by Deutsche Welle in order not to miss any user engagement coming through this channel in the form of replies or interactions with MULTISENSOR content using Twitter itself, as well as Twitter Analytics and a tool called Twitonomy[6] for further in depth engagement analysis. These two tools are also used for the following analysis of Twitter's stats.

Statistics and Evaluation

During the project's lifetime, the channel sent out a total of ~960 Tweets to a total of 225 Followers. This results in about one tweet per day during the entire lifetime of the project. One third of all tweets were retweets, tweets written by other uses and redistributed by MULTISENSOR, leaving two thirds original tweets by the project.

[5] https://bufferapp.com/

[6] http://www.twitonomy.com/

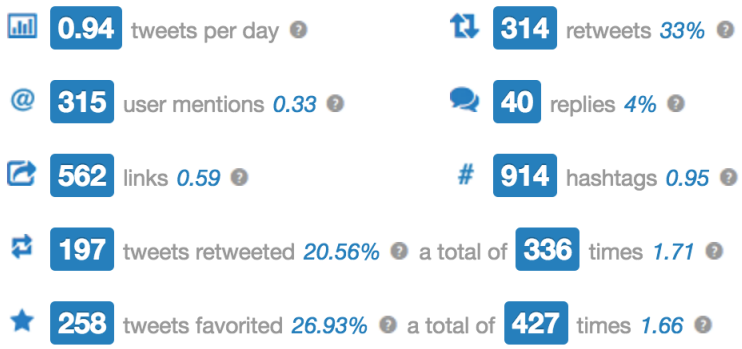

Figure 20: Twitter Analysis on Tweets and Interactions taken from Twitonomy

Among the project's followers were accounts with large follower-numbers as well as of course many smaller ones. The followers ranked from individual persons to companies or media institutions. Among the most prominent ones being accounts like:

- @StartupGrind, a support account for start-ups with around 430.000 Followers,
- @SandyTweetAngel, a marketing company with around 230.000 Followers
- @henkvaness, a data specialist and social media expert with around 37.000 Followers
- @mention, an online media monitoring company, with around 21.000 Followers

While the total number of MULTISENSOR's 225 Followers might not be as impressive as these accounts, it can still be considered a good turnout, taking into account that it is quite difficult to grow your first 500-1000 Followers and usually takes quite a lot of time and work as well as the right topic at the right time. But looking at the more numbers from the Twitter campaign show, that the work done by MULTISENSOR on Twitter did receive some praise and recognition.

For example, the project was listed 74 times by other twitter users, with an average list size of about 50 Subscribers. This broadened the list of recipients of the MULTISENSOR messages by about another 3.700 potential Followers. Taking a closer look at the topics of the lists showed that MULTISENSOR was reaching out to the right audiences. The lists were covering topics like

- Media Monitoring
- Sentiment Analysis
- Machine Translation
- Machine Learning
- Social Media
- Data Analysis

Looking at the Tweets themselves, you can find examples backing these assumptions. Some of the tweets had very large viewing (Figure 21 – average viewing numbers were around 1000) or interaction rates (Figure 22 – average interaction rate was around 20%-25% as can be seen in Figure 20).

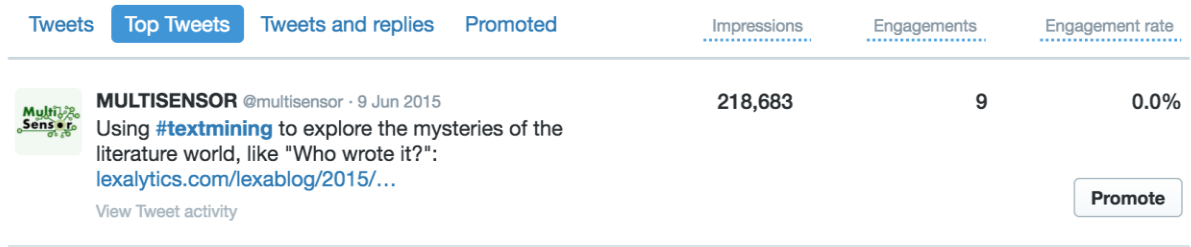

Figure 21: Example of high number of Twitter-Views

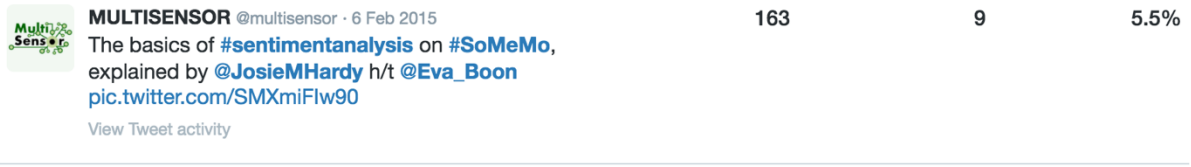

Figure 22: Example of high engagement rate on Twitter

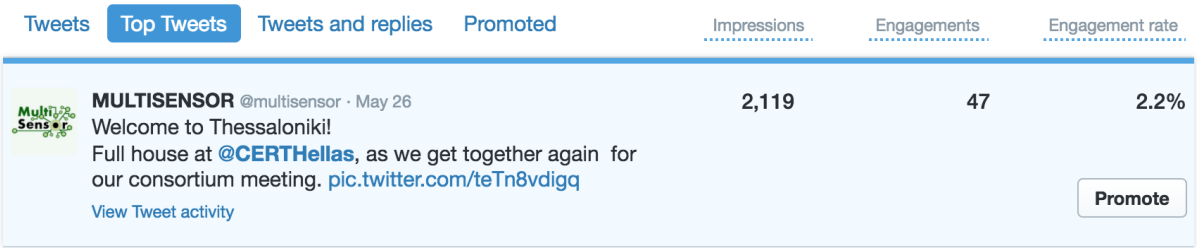

Figure 23: Example of large numbers of interactivities on Twitter

This tells us that people were following along and listening to the MULTISENSOR story, while others chose to engage (Figure 23) with the project and share MULTISENSOR's messages among their peers.

As a take away for the next project, we would recommend to increase the direct engagement with twitter followers. A strategy for a new project should include Twitter not only as a distribution channel, but also as a channel for possible direct interaction through quizzes, surveys and (more) invitations for participation in the project. This could lead to even more good examples like the one chosen here. But Twitter should definitely be used as a tool for communication and dissemination, as it proves to be very valuable in reaching out to a larger audience and getting feedback.

3.3.2 LinkedIn

Setup, Strategy and Content

Taking into account the development of LinkedIn as an "online CV site", it seems obvious, that LinkedIn can be considered a more "professional" network, than Twitter. This goes both for the technical and visual setup of the network as well as for the content being shared and the language being used there.

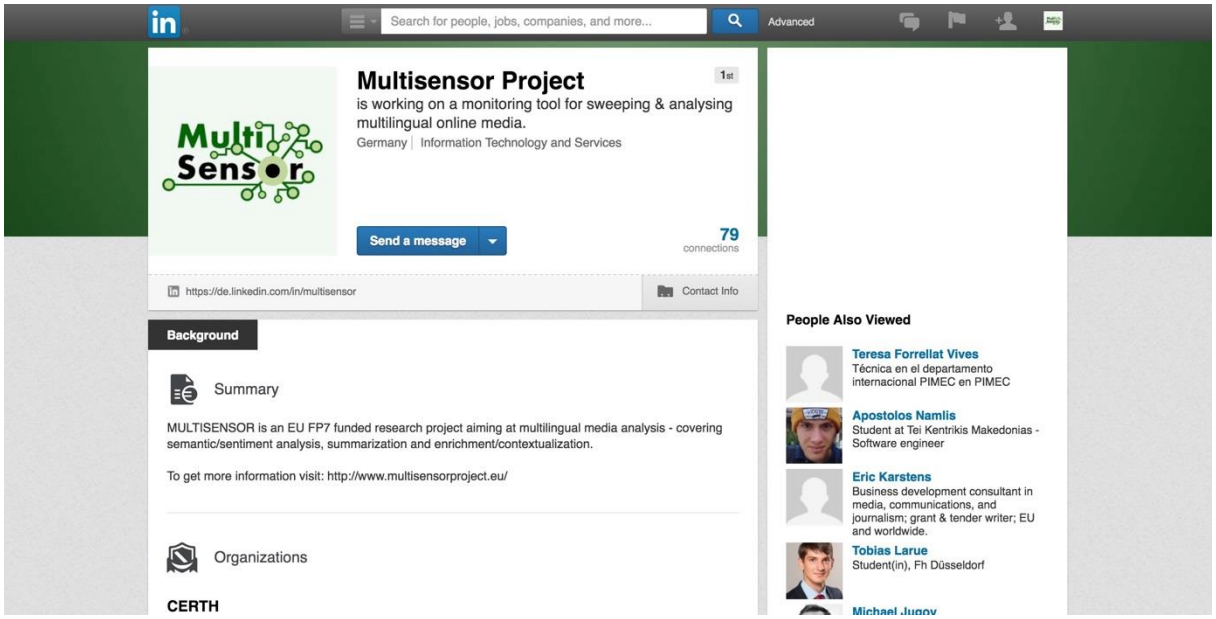

Figure 24: MULTISENSOR's LinkedIn Profile

MULTISENSOR set up a LinkedIn[7] account early on, aiming to create a network of business and research contacts around the core topics of the project. The profile contained the most basic information about MULTISENSOR, from the description of the general idea, to the project partners and main areas of research. The project then set out building its network by first connecting to project members and later on beyond this inner circle through recommendations and direct contact requests. The profile also grew its number of connections through direct interaction with experts at conferences and workshops, where people were made aware of the profile as a possible way to stay in contact and up-to-date with the project's work.

In order to keep all connections informed about the project's progress, Deutsche Welle, who took care of the profile on a regular basis, set up an automated connection between the project's blog and the LinkedIn profile after year 1. The interlinking was realised by using IFTTT, a social media site allowing for short workflows, e.g. to connect two different cervices. A so-called IFTTT recipe was created, triggering an automated status update on the LinkedIn profile, every time a new item was posted to the MULTISENSOR blog.

[7] https://www.linkedin.com/in/multisensor

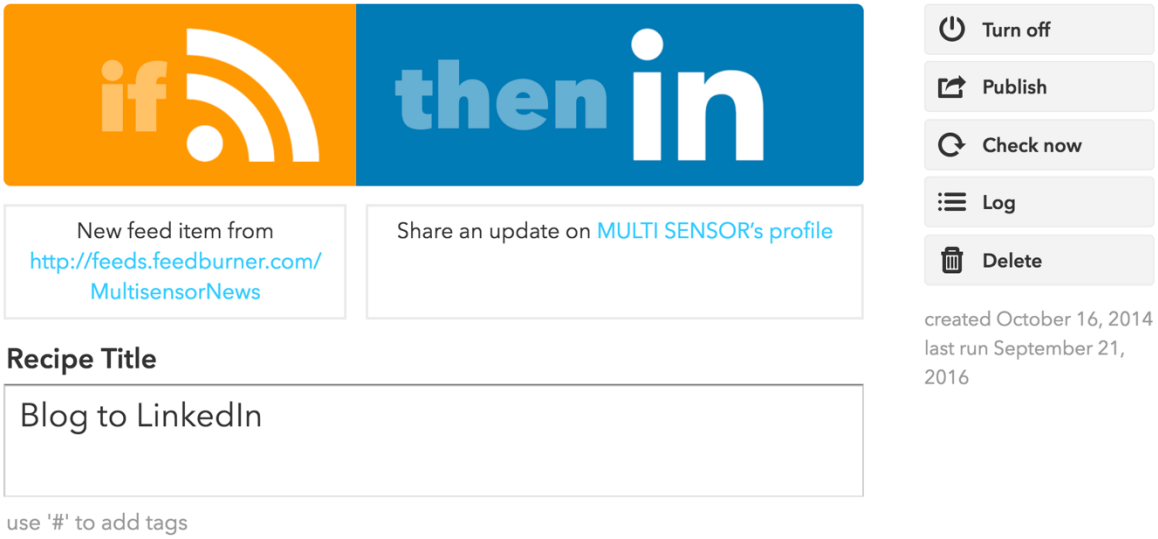

Figure 25: IFTTT recipe for automatically posting blog items to LinkedIn

This way, users connected to the MULTISENSOR profile would see the updates and stay informed about the progress. The way the posting was made users were also able to directly go to the project's website and follow up on the information there.

Statistics and Evaluation

As the overall goal for LinkedIn was from the beginning to be used as a networking tool not a publishing tool, the main goal was on growing the number of connections. Slowly but steadily the project managed to grow a number of connections, reaching a final of **79 connections**, from a variety of different backgrounds (see Figure 27). Many of those connections come from the areas the project covered, like Media Monitoring, Machine Learning and others.

Seeing that those connections not only followed the updates posted, but also interacted with some of the items posted, this can be considered a successful usage scenario (see FIGURE).

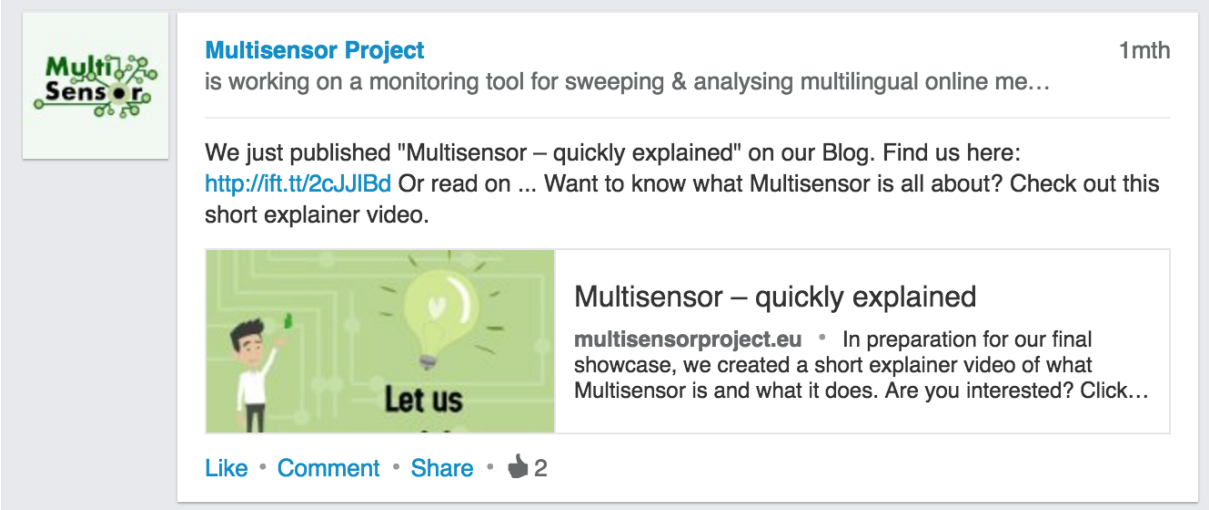

Figure 26: Example of an automated posting on the MULTISENSOR LinkedIn Profile with interactions

Overall the use of LinkedIn as a dissemination tool can be considered useful for a project like MULTISENSOR and should be included in other projects as well, of not already the case. First of all because it is such a good tool to create a professional network especially in the scientific and economic field. Secondly because there are so many people on LinkedIn, and not all of them are using Twitter of Facebook or other more "private" social networks.

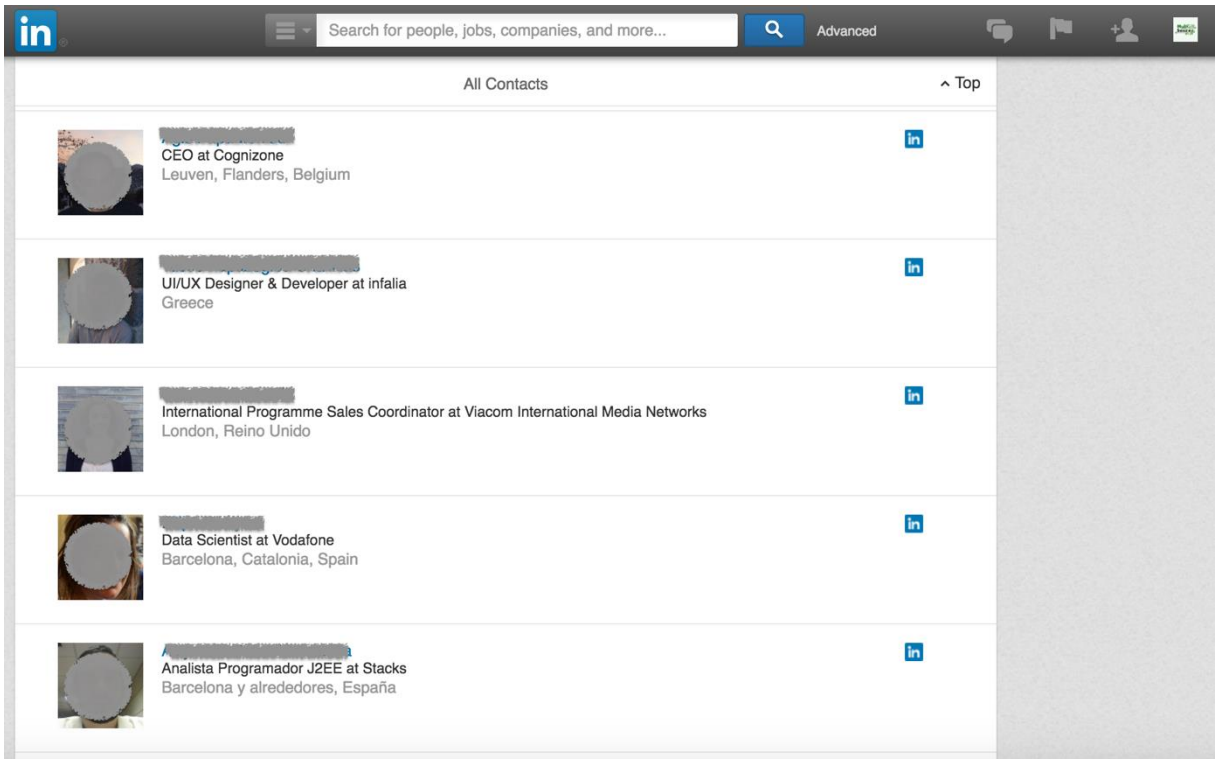

Figure 27: Small excerpt of connections on LinkedIn showing the diversity & focus

The use of LinkedIn could still be strengthened by not only posting updates, but also using LinkedIn Pulse, LinkedIn's internal publishing tool, to directly interact with the scientific and economic network around. This could increase the number of professional contacts, who

could then be “recruited” for user groups or even advisory boards. They might also be good as a contact for the next project or even a valuable partner. However, it should not be forgotten that using LinkedIn in such a way requires a lot more time and effort and could then almost become the central hub for a project, similar to a project website.

3.3.3 Facebook

Setup, Strategy and Content

As the largest social network around, it is hard to get passed Facebook. The social media giant has taken up a lot of space and attention online, and many people can’t get by without it. However, despite many changes like Facebook Pages and Instant Articles it is still more of a private network rather than an open publishing and networking tool. Most connections on Facebook are made among friends who know each other and the distribution of news on the network is largely not public and controlled through Facebook’s algorithm. This is why the network is not an ideal candidate for the distribution of news from a research project.

MULTISENSOR went ahead and gave it a try though, setting up a project page, hence allowing Facebook[8] users to “like” it and hence connect to the project.

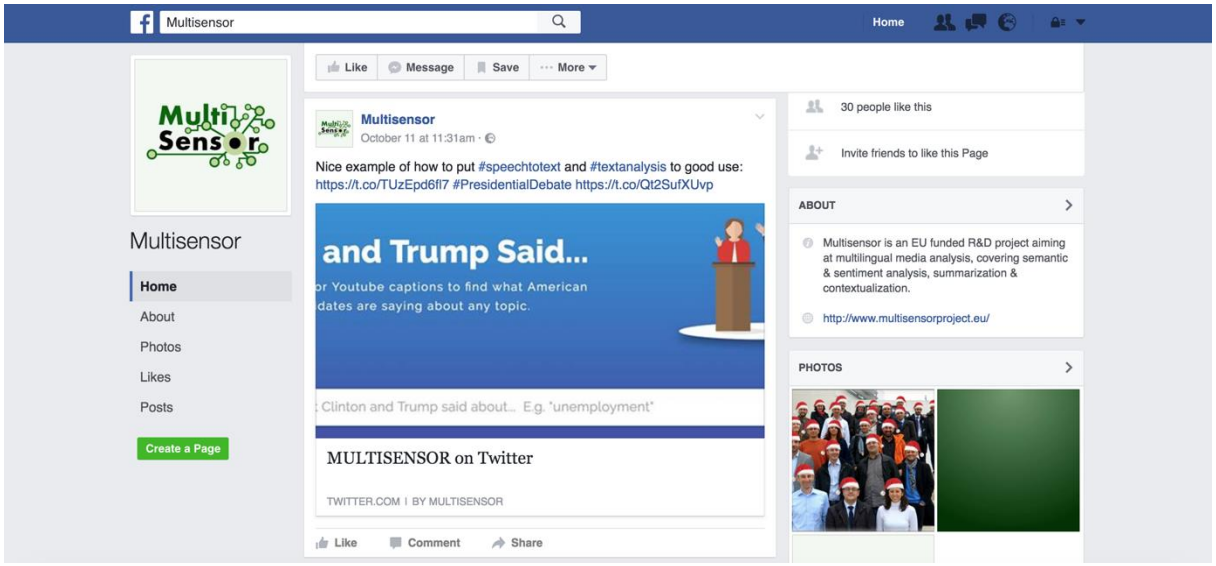

Figure 28: MULTISENSOR's Facebook page

In order to run a successful Facebook page, it needs a lot of content and a regular schedule. Something soon turned out to be too much to do manually in addition to the other dissemination activities on Twitter, LinkedIn and the project’s blog.

It was then decided after year 1, that the page should also be automated, similar to the LinkedIn Page. The main difference here, was however, that the connection was not made with the blog, but with the Twitter channel, which had a much higher output rate, leading to more postings on Facebook as well. The downside of this was, that the connection through IFTTT to Twitter was clearly visible to users as Facebook displays the original Links used for

[8] https://www.facebook.com/Multisensor-1481238748826033/

the forwarding. So it was always clear to users that they were looking at an automated account.

Statistics and Evaluation

All in all, the automated Facebook page managed to attract a total number of 30 People ("Likes") over a period of two years. This is not very much, but it did lead to a few interactions as can be seen in Figure 29. Not surprisingly here, the most interactions actually come from "emotional" posts, in this example posts from the last User Day in Barcelona. In comparison the messages with links to interesting research articles get a lot less attention.

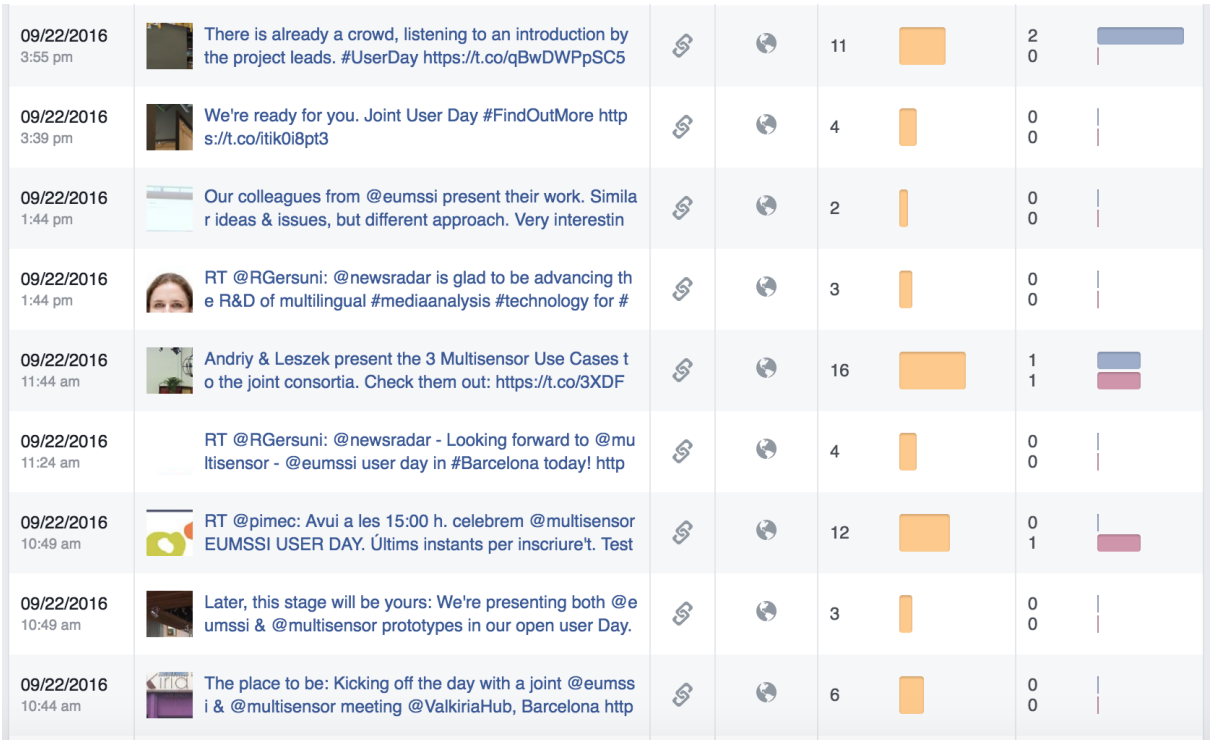

Figure 29: Excerpt of the Facebook Analysis page on interactions

Overall there were not enough interactions to run a detailed analysis, but it is clear, that a purely automated Facebook page doesn't get very much attention. But again, due to the restrictions on how content is distributed in the network, Facebook might just not be the best choice when it comes to disseminating research results from a single project. It does not represent the important target groups and doesn't allow for a free distribution of content. Furthermore, it takes a lot of time to fill a Facebook page with valuable and attractive content for users (e.g. a lot more pictures and videos). For future projects it is recommended to think about this before putting a Facebook page online and if the target group is right, then rather use it as the main hub of information and concentrate their efforts on only Facebook. But it shouldn't be run next to a Twitter Channel, a LinkedIn account and a project website.

3.4 Showcase

As a final dissemination item, the project has created a video showcase, wrapping up the project's work in a short animated film as Deliverable D9.8. This film gives an overview of the

MULTISENSOR story from the original issue the project aimed to tackle to the actual solution that was then built within the project's duration.

It was produced using an online animation tool based on slides for single scenarios. The movie was set up in a way, that it could be watched by outsides of the project and get a complete overview of the idea behind MULTISENSOR, the issues the project was tackling and the solutions build per use case.

It is split into several sections, an introduction, to give the overview and set the scene, a part explaining the challenges, a section on the use cases, explaining how MULTISENSOR works, and final part to warp the story up and give some more details on the background.

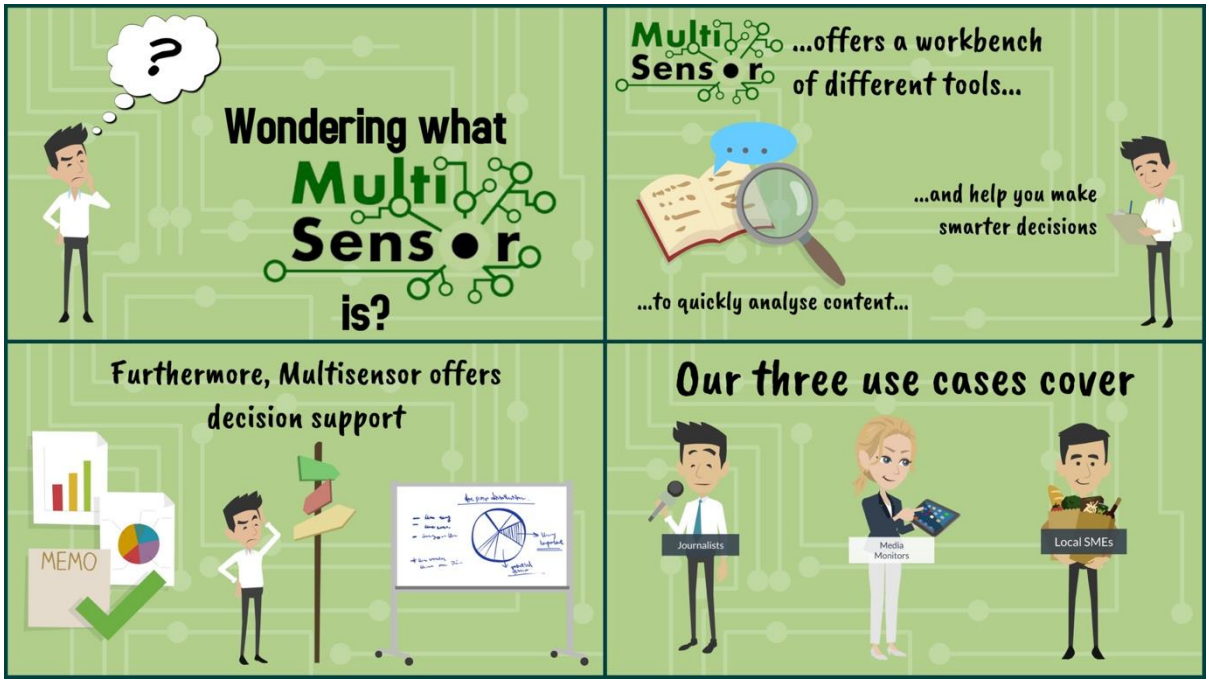

Figure 30: Screenshots from the MULTISENSOR Showcase

Using three protagonists according to the three use cases, the video explains the usage scenarios and how MULTISENSOR can help the journalists, media monitors and SMEs on their way to better search the web for relevant information, monitor mentions and important updates online for their customers or get better decisions on an internationalisation process of their SME.

The video will be made available on YouTube, as well as embedded on the website, before the official end of the project, free for everyone to watch. It will also serve as demo material for new projects and for possible exploitation efforts by the consortium members.

3.5 Publications

A major part of making a research project well known among, are publications. While scientific papers are a good way to quickly address the scientific community and creating interest in a research project like MULTISENSOR, newsletters and press releases are needed to address a wider audience directly or through publications in the media about the project.

MULTISENSOR has published both scientific papers as well as newsletters and press releases for the public. Both were made available on the website[9], in addition to the original way of publication. As already shown in chapter 3.2 , this worked well in attracting interest in the project. The following two chapters give a few more details on the publications, press releases and newsletters sent out by the project's partners.

3.5.1 Scientific Papers

Right from the beginning, the MULTISENSOR consortium was publishing scientific papers about the work planned and later done in MULTISENSOR. The scientific project partners went to different conferences and published to several different magazines and proceedings publications. All in all, a total number of **48 papers** were published under the label of MULTISENSOR, covering conferences across the globe in all scientific matters the project touched through its work. This number well exceeded the original target of 20 scientific publications during the project lifetime and helped promote the project among the scientific community, hence raising awareness and inform about the work in MULTISENSOR, as stated in chapter 2.3.

The following table gives an overview of all the papers published:

No.	Authors	Title	Publication	Date
1	F. Markatopoulou, A. Moumtzidou, C. Tzelepis, K. Avgerinakis, N. Gkalelis, S. Vrochidis, V. Mezaris, I. Kompatsiaris	ITI-CERTH participation to TRECVID 2013	Proceedings of TRECVID 2013 Workshop, Gaithersburg, MD, USA	20/11/2013 – 22/11/2013
2	N. Barbieri, F. Bonchi, G. Manco	"Influence-based Network-oblivious Community Detection"	Proceedings of the IEEE International Conference on Data Mining	07/12/2013 - 10/12/2013
3	L. Macchia, F. Bonchi, F. Gullo, L. Chiarandini	"Mining Summaries of Propagations"	Proceedings of the IEEE International Conference on Data Mining	07/12/2013 - 10/12/2013

[9] http://www.multisensorproject.eu/achievements/publications/

No.	Authors	Title	Publication	Date
4	A. Moumtzidou, K. Avgerinakis, E. Apostolidis, V. Aleksic, F. Markatopoulou, C. Papagiannopoulou, S. Vrochidis, V. Mezaris, R. Busch, I. Kompatsiaris	"VERGE: An Interactive Search Engine for Browsing Video"	Video Browser Showdown (VBS) 2014, Dublin, Ireland	07/01/2014
5	C. Aslay, N. Barbieri, F.Bonchi. R.Baeza-Yates	"Online Topic-aware Influence Maximization Queries"	Proceeding of the 17th International Conference on Extending Database Technology (EDBT 2014), Athens, Greece	24/03/2014 – 28/03/2014
6	Theodora Tsikrika, Anastasia Moumtzidou, Stefanos Vrochidis and Ioannis Kompatsiaris	"Focussed Crawling of Environmental Web Resources: A Pilot Study on the Combination of Multimedia Evidence"	Proceedings of the Environmental Multimedia Retrieval Workshop (EMR 2014)	01/04/2014
7	T. Tsikrika, C. Diou.	“Multi-evidence User Group Discovery in Professional Image Search”	Proceedings of the 36th European Conference on Information Retrieval (ECIR 2014), Amsterdam, The Netherlands	13/04/2014 – 16/04/2014
8	N. Barbieri, F. Bonchi	"Influence Maximization with Viral Product Design"	Proceeding of the SIAM International Conference on Data Mining	24/04/2014 - 26/04/2014
9	T. Tassa, F. Bonchi	"Privacy Preserving Estimation of Social Influence"	Proceeding of the SIAM International Conference on Data Mining	24/04/2014 - 26/04/2014

No.	Authors	Title	Publication	Date
10	M. Ballesteros, S. Mille and L. Wanner	"Classifiers for Data-driven Deep Sentence Generation"	Proceedings of the 8th International Natural Language Generation Conference (INLG), Philadelphia, USA	19/06/2014 - 21/06/2014
11	D. Liparas, A. Moumtzidou, S. Vrochidis, I. Kompatsiaris	"Concept-oriented labelling of patent images based on Random Forests and proximity-driven generation of synthetic data"	COLING'14 Workshop on Vision and Language (VL'14), Dublin	23/08/2014
12	N. Barbieri, F. Bonchi, G. Manco	"Who to follow and why: link prediction with explanations"	Proceedings of the ACM SIGKDD Conference on Knowledge Discovery and Data Mining	24/08/2014 - 27/08/2014
13	Y. HaCohen-Kerner, S. Vrochidis, D. Liparas, A. Moumtzidou and I. Kompatsiaris	"Key-phrase Extraction using Textual and Visual Features"	3rd Workshop on Vision and Language (VL), Dublin, Ireland	23/08/2014 – 29/08/2014
14	M.Ballesteros, B. Bohnet, S. Mille, and L. Wanner	"Deep-syntactic parsing"	Proceedings of the 25th International Conference on Computational Linguistics (COLING), Dublin, Ireland	23/08/2014 – 29/08/2014
15	D. Liparas, Y. Hacohen-Kerner, A. Moumtzidou, S. Vrochidis and I. Kompatsiaris	"News articles classification using Random Forests and weighted multimodal features"	3rd Open Interdisciplinary MUMIA Conference and 7th Information Retrieval Facility Conference (IRFC2014), Copenhagen, Denmark	10/11/2014 – 12/11/2014

No.	Authors	Title	Publication	Date
16	I. Arapakis, B. Barla Cambazoglu, M. Lalmas	"On the Feasibility of Predicting News Popularity at Cold Start"	Proceedings of the 6th International Conference on Social Informatics, Barcelona, Spain	10/11/2014 – 13/11/2014
17	X. Zuo, J. Blackburn, N. Kourtellis, J. Skvoretz, A. Iamnitchi	"The Influence of Indirect Ties on Social Network Dynamics"	Proceedings of the 6th International Conference on Social Informatics (SocInfo 2014), Barcelona, Spain	10/11/2014 - 13/11/2014
18	Y. Mehmood, N. Barbieri, F. Bonchi	"Modelling adoptions and the stages of the diffusion of innovations"	Proceedings of the 14th IEEE International Conference on Data Mining (ICDM 2014), Shenzhen, China	14/12/2014 – 17/12/2014
19	A. Moumtzidou, K. Avgerinakis, E. Apostolidis, F. Markatopoulou, K. Apostolidis, T. Mironidis, S. Vrochidis, V. Mezaris, Y. Kompatsiaris, I. Patras	"VERGE: A Multimodal Interactive Video Search Engine"	Proceedings of the 21st International Conference on MultiMedia Modelling (MMM15), Sydney, Australia	05/01/2015 - 07/01/2015
20	T. Tsikrika, K. Andreadou, A. Moumtzidou, E. Schinas, S. Papadopoulos, S. Vrochidis, Y. Kompatsiaris	"A Unified Model for Socially Interconnected Multimedia-Enriched Objects"	21st MultiMedia Modelling Conference (MMM2015), Sydney, Australia	05/01/2015 – 07/01/2015
21	T. Tsikrika, A. Moumtzidou, S. Vrochidis, and I. Kompatsiaris	"Focussed Crawling of Environmental Web Resources Based on the Combination of Multimedia Evidence"	Multimedia Tools and Applications	31/05/2015

No.	Authors	Title	Publication	Date
22	J.Soler-Company, M.Ballesteros, B. Bohnet, S. Mille, and L. Wanner	"Visualizing deep-syntactic structures"	Proceedings of the Demonstrations of the North American Chapter of Computational Linguistics (NAACL HLT 2015), Denver, USA	31/05/2015 – 05/06/2015
23	M.Ballesteros, B. Bohnet, S. Mille, and L. Wanner	"Data-driven sentence generation with non-isomorphic trees"	Proceedings of the North American Chapter of Computational Linguistics (NAACL HLT 2015), Denver, USA	31/05/2015 – 05/06/2015
24	T. Tsikrika, A. Latas, A. Moumtzidou, E. Chatzilari, S. Vrochidis, and I. Kompatsiaris	"Discovery of Environmental Web Resources Based on the Combination of Multimedia Evidence"	Proceedings of the Environmental Multimedia Retrieval Workshop (EMR 2015)	23/06/2015 - 26/06/2015
25	S. Vrochidis, I. Kompatsiaris, G. Casamayor, I. Arapakis, R. Busch, V. Alexiev, E. Jamin, M. Jugov, N. Heise, T. Forrellat, D. Liparas, L. Wanner, I. Miliaraki, V. Aleksic, K. Simov, A. M. Soro, M. Eckhoff, T. Wagner, M. Puigbó	"MULTISENSOR: Development of Multimedia Content Integration Technologies for Journalism, Media Monitoring and International Exporting Decision Support"	2015 IEEE International Conference on Multimedia and Expo (ICME 2015), Turin, Italy	29/06/2015 – 03/07/2015
26	M.Ballesteros, X. Carreras	"Transition-Based Spinal Parsing"	Proceedings of CoNLL (CoNLL 2015), Beijing, China	30/07/2015 – 31/07/2015
27	M.Ballesteros, B.Bohnet, S.Mille, and L.Wanner	"Data-Driven Deep-Syntactic Dependency Parsing"	Natural Language Engineering	18/08/2015

No.	Authors	Title	Publication	Date
28	C.Dyer, M.Ballesteros, W.Ling, A.Matthews, N. Smith	"Transition-Based Dependency Parsing with Stack Long Short-Term Memory"	Proceedings of ACL (ACL-IJCNLP 2015), Beijing, China	15/08/2015 – 20/08/2015
29	George Kalpakis, Theodora Tsikrika, Foteini Markatopoulou, Nikiforos Pittaras, Stefanos Vrochidis, Vasileios Mezaris, Ioannis Patras, and Ioannis Kompatsiaris	"Concept Detection on Multimedia Web Resources about Home Made Explosives"	Proceedings of the International Workshop on Multimedia Forensics and Security (MFSec 2015), to be held in conjunction with the 10th International Conference on Availability, Reliability and Security, Toulouse, France	24/08/2015 – 28/08/2015
30	F. Peleja and I. Arapakis	“Explanatory opinions: to whom or what is all the fuss about?”	Sixth BCS-IRSG Symposium on Future Directions in Information Access (FDIA'15), Thessaloniki, Greece	31/08/2015 - 04/09/2015
31	Y. Hacohen-Kerner, A. Sabag, D. Liparas, A. Moumtzidou, S. Vrochidis and I. Kompatsiaris	"Classification using various ML Methods and Combinations of Key-Phrases and Visual Features"	1st KEYSTONE Conference (IKC2015), Coimbra, Portugal	08/09/2015 – 09/09/2015
32	M.Ballesteros, C. Dyer, N. Smith	"Improved Transition-Based Parsing by Modelling Characters instead of Words with LSTMs"	Proceedings of EMNLP (EMNLP 2015), Lisbon, Portugal	17/09/2015 – 21/09/2015

No.	Authors	Title	Publication	Date
33	C. Doulaverakis, S. Vrochidis, I. Kompatsiaris	"Exploiting visual similarities for ontology alignment"	7th International Conference on Knowledge Engineering and Ontology Development (KEOD 2015), Lisbon, Portugal	12/11/2015 – 14/11/2015
34	A. Moumtzidou, T. Mironidis, E. Apostolidis, F. Markatopoulou, A. Ioannidou, I. Gialampoukidis, K. Avgerinakis, S. Vrochidis, V. Mezaris, I. Kompatsiaris, I. Patras	"VERGE: A Multimodal Interactive Search Engine for Video Browsing and Retrieval"	Proc. Video Browser Showdown (VBS'16) at the 22nd Int. Conf. on MultiMedia Modelling (MMM'16), Miami, USA	04/01/2016
35	I. Gialampoukidis, S. Vrochidis and I. Kompatsiaris	"Fast Visual Vocabulary Construction for Image Retrieval using Skewed-Split k-d trees"	Proceedings of 22nd International Conference on MultiMedia Modelling (MMM16), Miami, USA	04/01/2016 – 06/01/2016
36	S. Vrochidis, I. Patras and I. Kompatsiaris	"Gaze Movement-driven Random Forests for Query Clustering in Automatic Video Annotation"	Multimedia Tools and Applications	22/01/2016
37	I. Arapakis, B. B. Cambazoglu, and M. Lalmas	"On the Feasibility of Predicting Popular News at Cold Start"	Publication at JASIST	21/03/2016
38	I. Gialampoukidis, A. Moumtzidou, T. Tsikrika, S. Vrochidis and I. Kompatsiaris	"Retrieval of Multimedia objects by Fusing Multiple Modalities"	International Conference on Multimedia Retrieval (ICMR), New York, USA	06/06/2016 - 09/06/2016

No.	Authors	Title	Publication	Date
39	I. Gialampoukidis, A. Moumtzidou, D. Liparas, S. Vrochidis, I. Kompatsiaris	"A hybrid graph-based and non-linear late fusion approach for multimedia retrieval"	14th International Workshop on Content-based Multimedia Indexing (CBMI), Bucharest, Romania	15/06/2016 - 17/06/2016
40	A. Moumtzidou, I. Gialampoukidis, T. Mironidis, D. Liparas, S. Vrochidis, I. Kompatsiaris	"A Multimedia Interactive Search Engine based on Graph-based and Non-linear Multimodal Fusion"	14th International Workshop on Content-based Multimedia Indexing (CBMI), Bucharest, Romania	15/06/2016 – 17/06/2016
41	I. Gialampoukidis, S. Vrochidis, I. Kompatsiaris	"A hybrid framework for news clustering based on the DBSCAN-Martingale and LDA"	12th International Conference on Machine Learning and Data Mining, New York	16/07/2016 – 21/07/2016
42	Ioannis Arapakis, Filipa Peleja, B. Barla Cambazoglu, Joao Magalhaes	Linguistic Benchmarks of Online News Article Quality	Proceedings of the 54th Annual Meeting of the Association for Computational Linguistics, Berlin, Germany	07/08/2016 – 12/08/2016
43	I. Gialampoukidis, G. Kalpakis, T. Tsikrika, S. Vrochidis, I. Kompatsiaris	"Key player identification in terrorism-related social media networks using centrality measures"	European Intelligence and Security Informatics Conference (EISIC 2016), Uppsala, Sweden	17/08/2016 - 19/08/2016
44	I. Gialampoukidis, D. Liparas, S. Vrochidis, I. Kompatsiaris	"Query-based Topic Detection Using Concepts and Named Entities"	1st International Workshop on Multimodal Media Data Analytics (MMDA 2016), The Hague, Netherlands	30/08/2016

No.	Authors	Title	Publication	Date
45	Boyan Simeonov, Vladimir Alexiev, Dimitris Liparas, Marti Puigbo, Stefanos Vrochidis, Emmanuel Jamin and Ioannis Kompatsiaris	"Semantic integration of web data for international investment decision support"	3rd international conference on Internet Science, Florence, Italy	12/09/2016 – 14/09/2016
46	I. Gialampoukidis, T. Tsikrika, S. Vrochidis, I. Kompatsiaris	"Community Detection in Complex Networks Based on DBSCAN* and a Martingale Process"	11th International Workshop on Semantic and Social Media Adaptation and Personalization (SMAP 2016), Thessaloniki, Greece	20/10/2016 – 21/10/2016
47	I. Gialampoukidis, S. Vrochidis, I. Kompatsiaris	"Incremental estimation of visual vocabulary size for image retrieval"	Proc. INNS Big Data 2016, Thessaloniki, Greece	23/10/2016 - 25/10/2016
48	F. Peleja and J. Magalhães	“Learning Text Patterns to Detect Opinion Targets”	Proceedings of the 7th International Joint Conference on Knowledge Discovery, Knowledge Engineering and Knowledge Management (KDIR'15), Lisbon, Portugal	12/11/2016 – 14/11/2016

Table 4: Overview of scientific papers published by MULTISENSOR members

3.5.2 **Press Releases and Newsletters**

In order to get beyond “just” the scientific community and reaching out to a broader audience from other areas, especially from the industry, projects like MULTISENSOR need to get in contact with the press and the partner’s communities. The best way to do this is through regular press releases and newsletters[10]. The following table gives an overview of all items sent:

[10] http://www.multisensorproject.eu/achievements/publications/ - under the tab Press Releases

No.	Type	Date	Partner/Description	Language
1	Press Release	28/11/2013	CERTH press release	Greek
2	Newsletter	05/12/2013	PIMEC Newsletter, specific MULTISENSOR item	Catalan
3	Newsletter	30/1/2014	PIMEC Newsletter, specific MULTISENSOR item	Catalan
4	Press Release	25/02/2014	pressrelations press release	German
5	Newsletter	13/03/2014	PIMEC Newsletter, specific MULTISENSOR item	Catalan
6	Newsletter	10/04/2014	pressrelations Newsletter, specific MULTISENSOR item	German/ English
7	Newsletter	30/10/2014	EuropaPress Newsletter, specific MULTISENSOR item	Catalan
8	Newsletter	30/10/2014	PIMEC Newsletter, specific MULTISENSOR item	Catalan
9	Newsletter	10/04/2015	PIMEC Newsletter, specific MULTISENSOR item	Catalan
10	Press Release	08/07/2015	pressrelations press release DEU/ENG	German/ English
11	Newsletter	15/07/2015	PIMEC Newsletter, specific MULTISENSOR item	English/ Spanish/ Catalan
12	Newsletter	29/07/2015	PIMEC Newsletter, specific MULTISENSOR item	English/ Spanish/ Catalan
13	Newsletter	14/10/2015	pressrelations internal newsletter, specific MULTISENSOR item (Part 1/ Part 2)	German
14	Newsletter	29/10/2015	PIMEC Newsletter, specific MULTISENSOR item	English/ Spanish/ Catalan
15	Newsletter	26/11/2015	PIMEC Newsletter, specific MULTISENSOR item	English/ Spanish/ Catalan

No.	Type	Date	Partner/Description	Language
16	Newsletter	01/12/2015	pressrelations internal newsletter, specific MULTISENSOR item (Part 1/ Part 2)	German
17	Newsletter	12/01/2016	PIMEC Newsletter, specific MULTISENSOR item	English/ Spanish/ Catalan
18	Newsletter	28/01/2016	PIMEC Newsletter, specific MULTISENSOR item	English/ Spanish/ Catalan
19	Newsletter	17/03/2016	pressrelations, Article at Datascouting	English
20	Newsletter	20/07/2016	PIMEC Newsletter, specific MULTISENSOR item	Spanish/ Catalan
21	Newsletter	06/09/2016	PIMEC Newsletter, specific MULTISENSOR item	Spanish/ Catalan
22	Press Release	19/09/2016	pressrelations press release	German/ English
23	Press Release	20/09/2016	PIMEC press release	Catalan
24	Newsletter	21/10/2016	PIMEC Newsletter, specific MULTISENSOR item	Spanish/ Catalan

Table 5: Overview of press releases and newsletters published by MULTISENSOR members

MULTISENSOR set itself the target to send at least 6 news items per year, leading up to a total of 18 news items altogether, as well as three (3) press releases in total, meaning at least one per year.

The project managed to send out five (5) press releases through its partners CERTH, PIMEC and pressrelations, as well as 19 news items in newsletters through PIMEC and pressrelations.

While pressrelations newsletter in German reaches about 1.300 readers, the English version goes out to about 90 subscribers, the internal one to about 160. PIMEC's newsletter is being received by well over 26.000 recipients.

3.5.3 **Datasets**

In order to function properly, the MULTISENSOR system needed a lot of training material in order to teach the algorithms what to do and what to look for. The raw data for these trainings sessions was in parts provided by the user partners PIMEC, pressrelations and DW, other sets were extracted by the technical partners from databases like DBpedia.

The data was then cleaned and refined in order for the algorithms to be able to work with it and to deliver clean results. Some of these clean datasets have been made available during the project's lifetime and have been published on the project's website[11] for the community to reuse. Altogether six different datasets have been made available; the following table gives an overview over them including a short description of the content.

No.	Dataset	Description	Partner	Number of downloads
1	WikiRef220	220 news articles, which are references to specific Wikipedia pages	CERTH	2
2	WikiRef150	150 web news articles, which are references to specific Wikipedia pages, so as to ensure reliable ground-truth	CERTH	11
3	ArticlesNews SitesData_1043	1043 web pages/ articles retrieved from three well-known news sites and their annotation with four topics found in the IPTC news codes taxonomy.	CERTH	9
4	ArticlesNews SitesData_2382	2382 web pages/ articles from several sites annotated with six topics found in the IPTC news codes taxonomy	CERTH	5
5	MULTISENSOR_ NewsArticlesData_12073	12073 articles from several news sites annotated with six topics found in the IPTC news codes taxonomy	CERTH	4
6	YahooNewsQualityDataset	Dataset of more than 500 news articles annotated with 14 editorial quality aspects	EURECAT	Not online

Table 6: Overview of Datasets published by MULTISENSOR

The download-numbers show, that there was an interest in this kind of data, even though not a strong one. Five of the six datasets have been downloaded 31 times, the last dataset not included, because it hadn't been uploaded yet, by the time of the evaluation. While not large, this number still shows that the data has been reused and that MULTISENSOR was able to give something back to the community.

[11] http://www.multisensorproject.eu/achievements/datasets/

3.5.4 Open Source Code

While some elements of the work in MULTISENSOR have been developed with a commercial interest in mind, other parts were planned to be released under open source licences. MULTISENSOR managed to publish 16 different frameworks and code fragments, that were (are) made available through the projects website[12], for everyone to download.

In total so far 90 downloads of different elements have been registered through the website (the actual numbers might be a bit larger, as the code can also be directly accessed through the publication pages, e.g. github, directly). As not all code elements were available before the end of the project, there were no download numbers available for some of them. But the code elements will be published through the website beyond the end of the project, as long as the website stays online and accessible (for another two years beyond the end of the project.)

Even though this total number and the individual numbers are not very high, the publication of the code is still considered a success for the project, as it shows, that the work is being reused and distributed among the community. MULTISENSOR is also hoping that these numbers will continue to grow as many more research initiatives could benefit from the experiences made in MULTISENSOR, including possible follow up projects and initiatives.

The following table gives an overview of all the code elements made available through the project and, where already applicable, the number of downloads tracked through the website of those elements.

No.	Code Element	Description	Partner	Number of downloads
1	VERGE	Hybrid interactive video retrieval system, capable of searching into video content by integrating different search modules that employ visual- and textual-based techniques.	CERTH	4
2	Socially interconnected/ interlinked and multimedia-enriched objects	Model for representing multimedia content in the context of the Web and Social Media.	CERTH	25
3	Mate Tools surface statistical dependency parser	Tool converting plain text to dependency structures annotated with surface-syntactic relations, lemmas, part of speech, and morpho-syntactic features	UPF	15

[12] http://www.multisensorproject.eu/achievements/code/

No.	Code Element	Description	Partner	Number of downloads
4	Character-based Stack-LSTM surface parser	Tool to convert plain text to dependency structures annotated with surface-syntactic relations.	UPF	Not available yet
5	Deep statistical dependency parser	Parser converting surface-syntactic dependency structure as produced, e.g., by the MATE Tools parser, to dependency structures annotated with deep-syntactic relations in the sense of the Meaning-Text Theory	UPF	12
6	DSynt Converter (ENG)	Tool to convert reference surface-syntactic annotation of English (Penn TreeBank) into its corresponding deep-syntactic annotation in the CoNLL'09 format	UPF	5
7	Frame Semantics parser (ENG)	Tool to produce structures as found in FrameNet.	UPF	Not available yet
8	Deep statistical text generator	Tool converting deep-syntactic dependency structures in the sense of the Meaning-Text Theory (in the CoNLL'09 format) to linearized structure with all the words of the sentence.	UPF	Not available yet
9	Twitter Crawler	Crawler for Contributor Analysis and Name Search	EURECAT	12
10	Topic detection	Framework for topic detection as a clustering problem and a hybrid clustering approach for assigning news articles into topics.	CERTH	9
11	Category-based classification	Framework for classification of news articles into a predefined set of generic categories	CERTH	6
12	Multimedia retrieval	Multimedia language-independent retrieval framework fusing multiple modalities, integrating high-level information.	CERTH	2

No.	Code Element	Description	Partner	Number of downloads
13	Multimedia concept and event detection	Framework for video concept and event detection	CERTH	Not available yet
14	Community detection	Module for the detection of Twitter communities, given a list of desired keywords/hashtags	CERTH	Not available yet
15	Ontology alignment	Ontology alignment algorithm for computing a visual-based similarity metric for entity matching between two ontologies	CERTH	Not available yet
16	User and Context-centric Content Analysis	Code for the implementation of models for representing contextual, sentiment and online social interaction features, as well as deploying linguistic processing at different levels of accuracy and completeness	EURECAT	Not available yet

Table 7: Overview of Code elements published by MULTISENSOR

3.6 Dissemination Events

In regards to events, MULTISENSOR tried a varied approach in order to reach out to the target audiences with the necessary repetition. This was to ensure that MULTISENSOR could reach everyone with their message, as described in chapter 2.1 .

3.6.1 Workshops

The dissemination plan foresaw at least two joint workshops in cooperation with the EUMSSI project. The reason for this were the similarities in the use cases – both projects were targeting journalists and media monitors and had an overlap in project partners – as well as the exchange among likeminded projects for feedback and suggestions. Altogether the projects managed to meet up four times, three times during consortium meetings, once for a joint workshop at an international conference. Attendance was close to the envisioned 30 and 40 participants.

No.	Date	Type	Number of Participants
1	11/03/2015	Joint workshop in Barcelona	MULTISENSOR (16) EUMSSI (13)
2	23-27/11/2015	Joint evaluation workshop in Bonn	MULTISENSOR (20) EUMSSI (14)

No.	Date	Type	Number of Participants
3	30/08/2016	Workshop with EUMSSI on Multimodal media data analytics (MMDA) in conjunction with the 22nd European Conference on Artificial Intelligence (ECAI) 2016, in The Hague	Total: 16 MULTISENSOR & EUMSSI (3) EXTERNAL RESEARCHERS (13)
4	22/09/2016	Joint evaluation workshop with EUMSSI in Barcelona	MULTISENSOR (20) EUMSSI (12)

Table 8: Overview of joint project workshops held by MULTISENSOR

3.6.2 **Initiatives, Events and Conferences**

MULTISENSOR also set out to present its work and progress among a like-minded community. The most effective way to do so was clearly through participating in scientific and technical initiatives, events and conferences, to showcase the project's work through spreading the word, presentations and demonstrations.

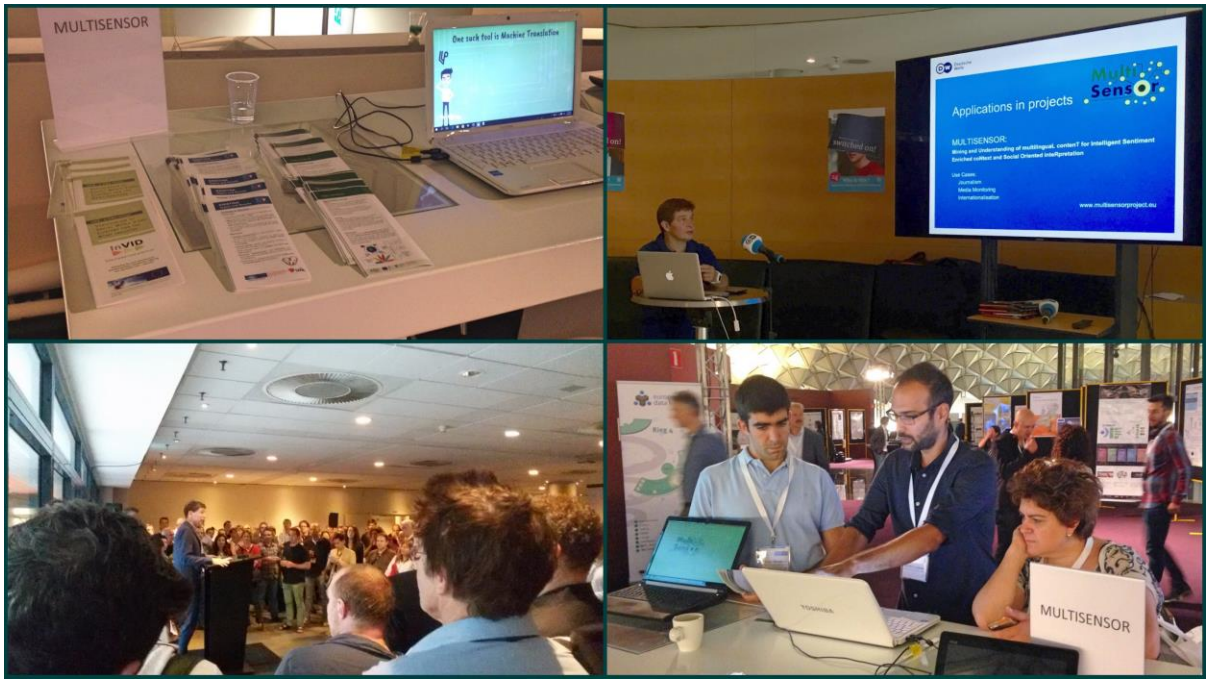

Figure 31: Presenting MULTISENSOR at Conferences and Events

The target set for these events was to have at least three (3) participations in cluster events and/or standardization initiatives each year to reach a total of nine (9) such participations in total.

As can be seen from Table 9 the project's consortium managed to present and participate in over 30 such initiatives and events. The meetings ranged from large classic international tech fairs (like CeBIT) to special initiatives (like joining the European Center for Social Media).

No.	Initiative/Event/Conference	Partner	Date
1	MULTISENSOR presentation at LT Innovative Summit 2013, Brussels, Belgium	CERTH	26/06/2013 – 27/06/2013
2	MULTISENSOR presentation at 6th IRF conference for Science and Industry, Limassol, Cyprus	CERTH	07/10/2013 – 09/10/2013
3	MULTISENSOR joins European Center for Social Media	CERTH	11/02/2014
4	MULTISENSOR presence at CeBIT 2014	LT	14/03/2014
5	MULTISENSOR presence at 46th FIBEP Congress, Dubai	PR	12/03/2014 - 15/03/2014
6	MULTISENSOR presentation at ESCW 2014, Anissaras/Hersonissou, Crete	CERTH	27/05/2014
7	MULTISENSOR presentation at CEN/BII in Paris, France	EVERIS	03/06/2014 - 05/06/2014
8	MULTISENSOR presence at AMEC International Summit, Amsterdam, Netherlands	PR	11/06/2014 - 12/06/2014
9	MULTISENSOR presence at 7th GATE training course, Sheffield, UK	ONTOTEXT	09/06/2014 - 13/06/2014
10	MULTISENSOR presentation at Global Media Forum 2014, Bonn, Germany	DW	30/06/2014 - 02/07/2014
11	MULTISENSOR presentation at the 4th International Workshop on Cyber-Physical Cloud Computing (CPCC2014), Osaka, Japan	CERTH	27/08/2014 - 29/08/ 2014
12	MULTISENSOR presence at Kommunikationskongress 2014, Berlin, Germany	PR	25/09/2014 - 26/09/2014
13	MULTISENSOR presentation at the Big Bang Data exhibition at the CCCB in Barcelona, Spain	UPF	21/10/2014
14	MULTISENSOR presence at BBC NewsHack, London, UK	ONTOTEXT	15/12/2014 - 16/12/2014
15	MULTISENSOR presentation at Horizon 2020 ICT-16 Big Data networking day, Brussels	EVERIS	16/01/2015
16	MULTISENSOR presentation at Riga Summit, META-FORUM, Riga	CERTH	27/04/2015 - 29/04/2015
17	MULTISENSOR presentation at Virolai school, Big data project, Barcelona, Spain	EVERIS	05/05/2015

No.	Initiative/Event/Conference	Partner	Date
18	MULTISENSOR presentation at Technology Forum 2015, Thessaloniki, Greece	CERTH	08/05/2015
19	MULTISENSOR presence at AMEC International Summit, Stockholm, Sweden	PR	03/06/2015 - 04/06/2015
20	MULTISENSOR Demonstration at ICME 2015, Torino, Italy	CERTH	29/06/2015 - 03/07/2015
21	MULTISENSOR joins the "Cracking the language Barrier" Initiative	All	07/07/2015
22	MULTISENSOR presence at 10th European Summer School on Information Retrieval (ESSIR2015), Thessaloniki	UPF, EURECAT	31/08/2015 - 04/09/2015
23	MULTISENSOR presence at Kommunikationskongress 2015, Berlin, Germany	PR	17/09/2015 - 18/09/2015
24	MULTISENSOR presence at ICT event, Lisbon, Portugal	DW	22/10/2015
25	MULTISENSOR presentation at the 7th International Conference on Knowledge Engineering and KEOD 2015, Lisbon, Portugal	ONTOTEXT	12/11/2015 - 14/11/2015
26	MULTISENSOR presence at the 47th FIBEP Congress, Vienna, Austria	PR	17/11/2015 - 20/11/2015
27	MULTISENSOR presence at CeBIT 2016, Hanover, Germany	LT	14/03/2016 - 18/03/2016
28	MULTISENSOR demonstration at ESWC Conference, Heraklion, Greece	UPF	29/05/2016 - 02/06/2016
29	MULTISENSOR demonstration at BIZ Barcelona, Barcelona, Spain	PIMEC	01/06/2016 - 02/06/2016
30	Deutsche Welle Global Media Forum, Bonn, Germany	DW	13/06/2016 - 15/06/2016
31	MULTISENSOR presence at AMEC International Summit, London, UK	PR	15/06/2016 - 16/06/2016
32	MULTISENSOR presentation at European Data Forum (EDF) 2016, Eindhoven, Netherlands	CERTH	29/06/2016 - 30/06/2016
33	MULTISENSOR demonstration at Linked Open Data Workshop at SEMANTiCS 2016, in Leipzig, Germany	ONTOTEXT	12/09/2016 - 15/09/2016

No.	Initiative/Event/Conference	Partner	Date
34	MULTISENSOR presence at Kommunikationskongress 2016, Berlin, Germany	PR	22/09/2016 - 23/09/2016

Table 9: Overview of initiatives/events/conferences attended by MULTISENSOR

The participations proofed to be very valuable in connecting to the community, showcasing and discussing the progress of the project and getting valuable feedback from an expert community. The large number of events also shows the diversity and interconnectivity of areas covered by the consortium to spread the word about MULTISENSOR.

3.6.3 Meetings and collaboration with related projects

Beyond the pre-planned joint EUMSSI Meetings and the conferences mentioned before, MULTISENSOR also tried to collaborate with other additional EU-funded research projects. With a target of three (3) meetings per year with related ICT projects, so 9 in total, the project wanted to make sure to go beyond the own development silo and get more outside views on the development, while at the same time widening its own horizon and giving valuable feedback to others.

As can be seen in Table 10 the project managed to meet a total of 14 times, with other projects. Exchanges that proved to be very fruitful and helpful to both sides.

No.	Projects	Date
1	Meeting of MULTISENSOR (CERTH/DW) and SocialSensor (DW) at SocialSensor Meeting	12/11/2013 - 14/11/2013
2	Meeting of MULTISENSOR (TALN-UPF) and EUMSSI (GLiCom-UPF) at UPF, Barcelona, Spain	22/01/2014
3	Meeting of MULTISENSOR (Everis/UPF) and EUMSSI (UPF/VSN) at UPF, Barcelona, Spain	19/02/2014
4	Meeting of MULTISENSOR (BM-Y!/TALN-UPF) and EUMSSI (GLiCom-UPF) at Yahoo Labs Barcelona (now EURECAT), Barcelona, Spain	26/03/2014
5	Conference call between MULTISENSOR (LT) and EUMSSI (IAI Saarbrucken)	10/06/2014
6	Meeting of MULTISENSOR (BM-Y!) and EUMSSI (GLiCom-UPF) at Yahoo Labs Barcelona (now EURECAT), Barcelona, Spain	01/09/2014
7	Meeting of MULTISENSOR and REVEAL, Thessaloniki Greece	28-29/04/2015
8	KRISTINA & MULTISENSOR meeting in Rotterdam. The partners participating were: CERTH and UPF	16&17/6/2016
9	KRISTINA & MULTISENSOR meeting in Barcelona. The partners participating were: CERTH and UPF	14&15/10 2015

No.	Projects	Date
10	Meeting of MULTISENSOR and EUMSSI, Bonn, Germany	26/11/2015
11	Meeting of MULTISENSOR and REVEAL, Oslo, Norway	12/01/2016 - 13/01/2016
12	Meeting of MULTISENSOR and KRISTINA, Barcelona, Spain	29/02/2016 - 01/03/2016
13	Meeting of MULTISENSOR and KRISTINA, Rotterdam, Netherlands	16/06/2016 – 17/06/2016
14	Meeting of MULTISENSOR and EUMSSI, Barcelona, Spain	22/09/2016
15	Collaboration of MULTISENSOR with TENSOR in SIMMO model and in particular community detection, abstractive summarization and other modules.	01/09/2016 – 30/09/2016
16	Collaboration of MULTISENSOR and KRISTINA, Ulm, Germany	14/10/2016 – 15/10/2016

Table 10: Overview of MULTISENSOR Meetings/Collaboration Events with other projects

3.6.4 User Days/Open Door Days

As reaching out the actual users is most valuable for developing a product, MULTISENSOR planned to open up its research to a larger group of users at specific times of the project. In order to bundle resources, MULTISENSOR collaborated with the EUMSSI project and organized a total of two (2) User Days (target: 30 at least participants for each User Day) and two (2) Open Door Days (target: 50 participants for each).

No.	Description	No. Of Participants	Date
1	User Day combined with the consortium meeting in Bonn	60-65 (incl. 19 MULTISENSOR)	23/11/2015 - 27/11/2015
2	Open Door Day combined with the consortium meeting in Bonn	60-65 (incl. 19 MULTISENSOR)	23/11/2015 - 27/11/2015
3	Evaluation day in collaboration with Media Informatics Lab of School of Journalism & MC in Thessaloniki	20 (+4 CERTH)	15/09/2016
4	User Day combined with the consortium meeting in Barcelona	50-55 (incl. 17 MULTISENSOR)	22/09/2016
6	Open Door Day combined with the consortium meeting in Barcelona	50-55 (incl. 17 MULTISENSOR)	22/09/2016

Table 11: Overview of User Days and Open Door Days held by MULTISENSOR

As can be seen in the table above, MULTISENSOR managed to set up both, the two large user days, as well as the two open door days, bringing in a large number of potential users from the target audiences to both discuss as well as evaluate the project's prototypes. All meetings worked out well, giving the project valuable feedback on its development as well as a good publicity.

Figure 32: MULTISENSOR User Day 2015

3.6.5 Demonstrations and Project Presentations

Outside these planned events mentioned before, MULTISENSOR used every opportunity to demonstrated and showcase its product to interested members of the target audience. These events included meetings with other projects, collaboration events at consortium member's offices or scheduled one-on-one demonstrations for interested members of the partner's networks.

All in all, around thirty (30) independent project demonstrations were performed with individuals and groups interested in and/or connected to the project, further strengthening the outreach of the MULTISENSOR project

No.	Description	Date
1	MULTISENSOR presentation to the **ENGINE** project, Kick off meeting of ENGINE project, Wroclaw, Poland	01/10/2013
2	MULTISENSOR presentation to the **MUMIA** consortium, Limassol, Cyprus (by CERTH)	10/10/2013
3	MULTISENSOR presentation to the **WikiRate** project, Plenary meeting, Thessaloniki, Greece (by CERTH)	11/06/2014
4	Workshop with media monitoring company Newsaccess, demonstration of MULTISENSOR, Düsseldorf, Germany (by PR)	26/09/2014
5	Workshop with media monitoring company push| OBSERVER, demonstration of MULTISENSOR, Düsseldorf, Germany (by PR)	12/12/2014

No.	Description	Date
6	MULTISENSOR presentation to the iV&L Net members, Heidelberg, Germany	11/03/2015
7	Demonstration of MULTISENSOR prototype to Marga Soto, export freelance (by PIMEC)	19/05/2015
8	Demonstration of MULTISENSOR prototype to Marcela Véliz export freelance (by PIMEC)	19/05/2015
9	Demonstration of MULTISENSOR prototype to Marta Fernández, export freelance (by PIMEC)	19/05/2015
10	Demonstration of MULTISENSOR prototype to Daniel Sánchez, export manager RAFESA (by PIMEC)	21/05/2015
11	Demonstration of MULTISENSOR prototype to ICME 2015	30/06/2015
12	Workshop with media monitoring company Auxipress, demonstration of MULTISENSOR, Düsseldorf, Germany (by PR)	06/07/2015
13	Demonstrating MULTISENSOR video retrieval technologies in VBS 2016, MMM 2016, Miami, USA (by CERTH)	05/01/2016
14	Workshop with media monitoring company up2news, demonstration of MULTISENSOR, Düsseldorf, Germany (by PR)	14/01/2016
15	Prototype demonstration to Pere Cots, Impuls Estratègic Consulting CEO (by PIMEC)	19/01/2016
16	Workshop with media monitoring company Media Image, demonstration of MULTISENSOR, Düsseldorf, Germany (by PR)	17/02/2016
17	Demonstration of MULTISENSOR Prototype with user Feedback, at DW GMF, Bonn, Germany (by DW)	13/06/2016 - 15/06/2016
18	Demonstration of MULTISENSOR prototype to Mariana Damova (Mozaika) (by PIMEC)	29/06/2016
19	Demonstration of MULTISENSOR prototype to Marie Claire Tonna (Digital Catapult) (by PIMEC)	29/06/2016
20	Prototype demonstration to Peter Wu (In Summa).	29/06/2016
21	Demonstration of MULTISENSOR prototype to Dr. Flavius Fransincar (Erasmus University Rotterdam).	29/06/2016
22	Demonstration of MULTISENSOR prototype to Andrea Cavallaro (Konica Minolta Inc.).	29/06/2016
23	Demonstration of MULTISENSOR prototype to Mike Matton (VRT)	29/06/2016

No.	Description	Date
24	Demonstration of MULTISENSOR prototype to Eleonora Mazzoli (European Broadcasting Union)	29/06/2016
25	Demonstration of MULTISENSOR prototype to Anton Heijs (GlobalSets)	29/06/2016
26	MULTISENSOR presentation and demonstration to national research project AGENT, Düsseldorf, Germany (by PR)	12/07/2016
27	MULTISENSOR presentation and demonstration to national research project ATOM, Düsseldorf, Germany (by PR)	12/07/2016
28	MULTISENSOR presentation to **Media Cloud** (by CERTH)	13/07/2016
29	Demonstration of MULTISENSOR prototype to Alba Lara, export freelance.	26/07/2016
30	Demonstration of MULTISENSOR prototype to AUTH media labs.	15/09/2016

Table 12: Overview of MULTISENSOR Project presentations and demonstrations

3.7 User/Expert involvement and outreach

3.7.1 User Group

In order to have an expert group for questions regarding the development, for expert evaluation, feedback and support, MULTISENSOR started forming a User/Expert group, right from the beginning of the project. The group started out with experts known to the consortium in the areas covered by the project. They covered user topics like media monitoring and internationalisation as well as technical area of the project, such as sentiment analysis or language technologies.

The members of the user group were contacted upfront regarding their interest in being involved in the project's work. They were then contacted individually for evaluation sessions, the user days and open door days, as well as participating on the consortium meetings of MULTISENSOR.

Starting out rather small, the project managed to grow the User group up to 38 members.

No.	Organisation/Expert	Description	Category
1	Data Scouting	ICT company providing media monitoring solutions	Greece
2	JRC	Research centre working on media monitoring	Italy
3	Ekonm	ICT company providing semantics and data mining solutions	Israel

No.	Organisation/Expert	Description	Category
4	DOTSOFT	ICT company providing data mining solutions	Greece
5	Mozaika	ICT company providing data science solutions	Bulgaria
6	SEERC	Research centre working on knowledge management	Greece
7	Fraunhover MOEZ	Research centre	Germany
8	Fraunhofer FAME	Research institute working on the future of media	Germany
9	ATC	Software Company, Media research and development	Greece
10	European Journalism Center	Journalism Training and Research Organisation	Netherlands
11	Beeld & Geluid	Cultural-historical Media Organization	Netherlands
12	IRT	Research Institute for Mediatechnology	Germany
13	CASMAR	SME (security systems)	Spain
14	Zebra Design & Retail	SME (design & Retail)	Spain
15	Jordi Mallorquí	Export Manager freelance	Spain
16	Jordi Planas	Export Manager freelance	Spain
17	Míriam Sabaté	Export Manager PIMEC	Spain
18	Joan Carles Espigol	Export Manager freelance	Spain
19	Jerusalem College of Technology	College of Technology	Israel
20	Aii Data Processing Ltd	Market-Expert for monitoring, measurement and analytics of mainstream and social media with focus on emerging markets of Central and Eastern Europe	Bulgaria
21	QMUL, Multimedia and Vision Research Group	Multimedia applications	UK
22	University St. Gallen	Media & Communications Department	CH

No.	Organisation/Expert	Description	Category
23	Clipit	Media Monitoring	NL
24	eMedia Monitor GmbH	Media Monitoring (RTV)	Austria
25	Media Monitoring Project Zimbabwe	Media Monitoring	Zimbabwe
26	R-Media	Media Monitoring	Italy
27	Media Image Group	Media Monitoring	Romania
28	Euregio Srl GmbH	Media Monitoring	Italy
29	Media Tenor	Media Monitoring	Czech Republic
30	Media Informatics Lab	Media Research	Greece
31	IALE	ICT company providing data mining solutions	Spain
32	Neptuno Films	SME	Spain
33	Aquarius Cosmetics	SME	Spain
34	Ricard Navàs	Export Manager freelance	Spain
35	Pere Duran	Export Manager freelance	Spain
36	Marta Sánchez-Pol	Export Manager freelance	Spain
37	Serstem (Transformados Termoplasticos SL)	SME	Spain
38	Alba Lara	Expert in Internationalisation	Spain

Table 13: Overview of the MULTISENSOR User Group Members

3.7.2 **Standardization bodies**

MULTISENSOR has contributed to a small number of standardisation activities, relating to well-known standard bodies, mainly the W3C. By doing this, the project has helped the scientific and technological society to further develop and enhance existing tools and frameworks.

In particular, six (6) standard initiatives were addressed. MULTISENSOR, represented through its partners CERTH, ONTOTEXT, UPF and BM-Y! (now EURECAT), contributed to

- The MPEG-7 Standard (W3C)
- Linguistic Linked Data
- JSON-LD (W3C)
- RDF/OWL/SPARQL, CUBE ontology (W3C)
- The Emotion Incubator Group, Emotion Markup Language (EmotionML) (W3C)

The exact contributions can be found in the following table:

No.	Standardisation Body	Definition of potential standard contribution/ timing
1	W3C, MPEG-7	Contribute to the existing multimedia modelling standards by standardizing SIMMO. CERTH developed the Socially Interconnected and Multimedia-Enriched Object (SIMMO). This model definition has been accepted for publication in the 21st Conference on Multimedia Modelling (MMM2015).
2	Linguistic Linked Data	Use of ontological models for NLP (NIF, OLIA, OLIA constituent ontologies, NERD, MARL, FrameNet) is used for storing extracted linguistic information in the Knowledge Base and exploiting them for natural language generation. We defined various data scenarios for storing various kinds of data: Automatic Speech Recognition transcripts, captions, concepts recognized in video frames, etc. This work is leveraged by ONTO in recent commercial work in video automation in the automotive domain, also using ontologies patterns from FP7 LinkedTV.
3	Linguistic Linked Data	An approach for embedding FrameNet relation data to NIF was developed and published as a paper: “FN goes NIF: Integrating FrameNet in the NLP Interchange Format.” Alexiev, V.; and Casamayor, G. In Linked Data in Linguistics (LDL-2016): Managing, Building and Using Linked Language Resources, Portorož, Slovenia, May 2016
4	W3C, JSON-LD	Use of JSON-LD (a W3C recommendation) for serializing RDF data. This is the easiest way to share NLP results between the services along the processing pipeline, since it's easier to parse by web applications.
5	W3C, RDF/OWL/SPARQL, CUBE ontology	Adopt Semantic Web standards (RDF, RDFS, OWL) for data representation and SPARQL for querying
6	W3C Emotion Incubator Group, Emotion Markup Language (EmotionML)	Adopt EmotionML (partly) in sentiment analysis specifically for representing and storing information. Selection of the <dimension> element, among the various representation schemas provided by EmotionML, as the most suitable representation method describing an emotion or a related state according to an emotion dimension vocabulary.

Table 14: Overview of MULTISENSOR standardisation activities

4 CONCLUSIONS

As said in the beginning, a research project can't be successful without a good outreach, letting people know about its work and its progress.

Looking at the mere numbers, MULTISENSOR has fulfilled all the goals set in the beginning of the project (see Table 15), sometimes even exceeding the numbers, e.g. publishing more articles to scientific papers or participating in more conferences than planned. While this allows us to call it a successful dissemination campaign, the real success lies somewhere beyond the numbers.

Type of Action	**Target**	**Reached**
Joint Workshops	2 joint workshops 30-40 participants each	4 joint workshops ~ 16-34 participants
Initiatives, Events and Conferences	3 events/year, 9 in total	Year 1: 12 events Year 2: 11 events Year 3: 11 events **Total of 34 events**
Meetings with related ICT projects	~3 meetings/year 9 in total	Year 1: 6 events Year 2: 3 events Year 3: 7 events **Total of 16 events**
Press Releases	>1 press release/year 3 in total	Year 1: 2 press releases Year 2: 1 press releases Year 3: 2 press releases **Total of 5 press releases**
Newsletters	Total of 18 news items (~6 per year)	Year 1: 4 press releases Year 2: 5 press releases Year 3: 10 press releases **Total of 19 press releases**
Scientific Publications	/	48 papers & articles
User Days (UD)	2 UD/30 participants each	User Day 1: 60-65 Evaluation/User Day 2: 24 User Day 3: 50-55
Open Door Days (OOD)	2 ODD/50 participants each	Open Door Day 1: 60-65 Open Door Day 2: 50-55
Standardisation Activities	/	6 initiatives reached
Project demonstrations	>20 demonstrations	30 demonstrations
MULTISENSOR Project presentation	>10 consortia	14 consortia/companies

Type of Action	Target	Reached
Public Datasets	/	6 items
Public code elements	/	16 items
Website traffic	25% growth/year	Year 1: ~2067 visits Year 2: ~3950 visits (~ 91% ⬆) Year 3: ~5040 visits (~ 28% ⬆)
Twitter	/	225 Followers ~960 Tweets Listed by others 74 times
LinkedIn	/	79 connections
Facebook (Page)	/	30 Followers (Likes)

Table 15: Comparison of dissemination KPIs with actual goals reached

Because the numbers don't say anything about the value of the product the project has produced. This will yet have to be seen. The basis for this however are the networks built through the dissemination actions of MULTISENSOR. The connections made on LinkedIn or Twitter, that will now allow us to reach out and further explain, where we would like to go with this idea. Or maybe set up a follow up project with a new contact coming through the successful dissemination activities of this project.

This also leaves the opportunity to improve the dissemination actions the next time. For example, being more active on the website, relaying more of the project's activities. But also keeping a continuous stream on the twitter channel and involve the audience more in the project. The choice of channels should be well thought through as well – as said before. Maybe a future project could fully rely on and also entertain a high quality Facebook page – and thereby reach even more people around the globe and excite them for their ideas.

For MULTISENSOR the chosen approach worked well and brought a lot of attention to the project – as hoped.