Multimedia **A**uthoring and **M**anagement using your **E**yes and **M**ind

H2020-ICT-2014 - 644780

D8.4 - Impact Assessment and Updated Dissemination Plan

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Abstract: D8.4 starts by providing an overview of the dissemination strategy that we has adopted until M24, and reports on the dissemination activities that have been undertaken following this strategy. In addition, we use a number of measurable indicators to assess the impact of these activities and identify the ones that have been most effective in creating the intended awareness and outreach. We also compared against the commitments that we have taken in D8.2 both per partner and project-wise. These evaluations have formed the basis for imposing a number of corrective actions on our initial strategy, leading to an updated plan for the remainder of the project. In reporting about the undertaken dissemination activities we make sure to associate each activity with the dissemination means that have been used to implemented it, the target audience that was intended to reach, the indicators that have been used to assess its impact, and the methodology that has been used to monitor them. Finally, we provide a number of cases that we consider as highlights for the project's achievements and identify new opportunities for better coupling our dissemination efforts with the exploitation of MAMEM results.

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Executive Summary

The primary purpose of D6.4 is on the one hand to report about the undertaken dissemination activities and assess the impact that has been achieved through them, and on the other hand extract some useful conclusions feeding the revision of the dissemination plan that will be executed in the remainder of the project.

In achieving this two-fold purpose we start by providing a brief overview of MAMEM's initial dissemination plan as document in D6.4, recalling the target audiences, the dissemination instruments and the exploitation tracks identified in this document, but also the dissemination commitments and impact indicators that have been promised as part of this plan.

Following, we provide a rather detailed report on the undertaken activities separated based on each dissemination category. More specifically, for each dissemination category we list the undertaken activities, associated with the purpose of the activity and the target group, the dissemination instrument that has been used to implement them, the measurable indicator that has been used to measure its impact and the exploitation track that were intended to facilitate. The next section is devoted in presenting some of the project's activities that we consider as highlights, in the sense that they have given us the opportunity to present MAMEM is some of the most prestigious venues.

Finally, we draw a number of conclusions with respect to the success and failures of our dissemination strategy so far and identify a number of new dissemination opportunities that weren't considered in our original plan. This information creates the basis for updating the dissemination plans for remainder of the project, both at an individual-organization and project-wise level.

Abbreviations and Acronyms

API	Application Programming Interface
BCI	Brain Computer Interface
ECG	ElectroCardioGram
EEG	ElectroEncephaloGram
GSR	Galvanic Skin Response
MD	Muscular Disorder
PD	Parkinson Disease
HR	Heart Rate

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1 Introduction

This deliverable describes the work carried out in WP8 – "Dissemination and Exploitation" and specifically in the tasks related to the project's dissemination activities during the first and second year of the project. As such, its purpose is two-fold; on the one hand, to report on the dissemination actions undertaken by the MAMEM consortium during the first and second year of the project implementing the dissemination plan that has been set out in D8.2 [2], and on the other hand, to evaluate their impact, identify the weak and strong points of our initial plan and revise the dissemination activities for the remainder of the project.

MAMEM designs, implements and evaluates a set of prototype interface applications that are designed to execute multimedia-related usage scenarios through the user's eyes and mind. Technologies, methodologies and concepts from MAMEM are relevant for a broad range of stakeholders in different domains, and in D8.2 we have acknowledged that in order to ensure the sustainability of the results it is of utmost importance to disseminate activities at each stage of the project and continue throughout its lifetime. More specifically, in D8.2 we have specified that the dissemination activities of MAMEM should address as many stakeholders as possible ranging from the **patients with motor impairment** that will use the tools developed by the projects to the **decision makers** that are interested in personalized solutions and assistive technology, all the way to the **researchers** interested in the scientific fields of neuromuscular disorders, neuro-degeneration and rehabilitation and assistive technology, neural engineering, neuroimaging or brain computer interfaces, and the **developers** interested in adopting or extending the developed tools and applications. Our dissemination plan has been devised to reach all aforementioned categories of stakeholders, making sure that adequate effort is allocated for each target audience and specifying how to measure the achieved impact.

Moreover, apart from the stakeholder in D8.2 we have identified four different dissemination directions consisting of: a) **raising awareness** about the project's vision and goals, b) **establishing collaborations** with new clients or extent the already existing collaborations with new products and services, c) **engaging patients** in using the MAMEM technology, and d) ensuring maximum impact of the project's **scientific and technological achievements**. In addition, in D8.2 we have also specified a number of **dissemination instruments** that are typically employed to facilitate certain dissemination objectives. Based on these instruments we were able to specify with sufficient detail the envisaged activities, identify their impact indicators and link them with specific exploitation tracks. In this way, our dissemination plan consisted in a list of concrete actions that each partner is committed to undertake, allowing to assess the overall impact of the efforts allocated in dissemination. These actions could leverage a number of different dissemination channels, including: a) publicly available channels (i.e. **exhibitions, workshops**, **conferences**, **journal publications, specialized events,** b) **media** and **press**, c) **direct communication** with relevant stakeholders, and d) public outreach through the **project's website**, **newsletters**, **press releases**, and social media activity **Facebook, Twitter**, **LinkedIn and Google+**.

Considering the above, D8.4 has been organized as follows: **Chapter 2** makes a link with D8.2 by providing details about the objectives of our dissemination plan and the nature of the envisaged activities, the strategy characterising their execution, an overview on the dissemination instruments and the associated impact indicators, as well as the time plan and responsibilities for implementing these activities; **Chapter 3** describes, reports and analyses all the dissemination activities that have been conducted so far. This chapter shows also a preview of the main

documents templates and outreach materials elaborated by the Consortium; **Chapter 4** underlines some activities that we consider as highlights of our dissemination efforts; **Chapter 5** explains the corrective actions that have taken effect on our dissemination strategy as a result of our impact assessment. These corrections were materialized by identifying new dissemination opportunities that were not considered in our original plan, as well as by updating the individual and project-wise dissemination plan; **Chapter 6** concludes the deliverable. Finally, besides the main body of D8.4, we have also included a number of appendixes with dissemination-related material, consisting of: **Appendix A**: MAMEM Web Presence; **Appendix B:** Visual material from our dissemination activities as they have been posted in the "News" section of our web-site; and **Appendix C:** List of intended publications including tentative titles and venues.

As a forward reference of the update dissemination strategy we may refer to: a) shifting from researchers' biased to clients' biased activities, b) focusing on GazeTheWeb as the main promotional outcome of the project, c) identify and reach out to patients organization as potential clients, and d) drop the newsletter related activities in favour of increasing the micro blog-posts and social media activity.

2 Brief overview of MAMEM's initial dissemination plan

This Section makes the link with D8.2 by presenting a brief overview of MAMEM's initial dissemination plan, with the goal to establish a reference basis for evaluating the success or failure of our dissemination activities and decide on the corrective actions. Our intention in this section is to initially describe the most important elements of the adopted methodology, before becoming more concrete in terms of the undertaken and future dissemination actions. Its content is structured in the following sub-sections: a) project goal and purpose of dissemination actions, b) target audiences, c) dissemination instruments and methods, d) impact indicators, e) exploitation tracks and f) strategy for updating the dissemination plan. Subsequently, we report on the project dissemination activities and compare against the commitments of our initial plan.

2.1 Project goal and purpose of dissemination actions

The goal of MAMEM is to create an eco-system of software developers that will rely on the project's middleware to implement novel and more unobtrusive and multimodal brain computer interfaces (BCIs). Towards this objective, the dissemination activities of MAMEM are aligned with the following directions: a) ***Raise awareness*** among the relevant target groups by making the project and its vision known as early as possible in the project lifetime; b) ***Establish collaborations*** with new clients or extent the already existing collaborations with new products and services. Use the envisaged field trials and the corresponding prototypes as the main vehicle for giving technical demonstrations to the decision makers, showing how the policy models and the technologies developed in the project can be used; c) ***Engage patients*** in using the MAMEM technology within and across the borders of the field trials; d) ***Diffuse scientific achievements*** for ensuring that MAMEM outcomes will have maximum impact on the fields of assistive technology and brain computer interface technology. This will be achieved by publishing the project outcomes in research articles, presenting them in conferences and in general building up a community of interested developers and scientists.

2.2 Targeted Audiences

The dissemination plan sets out specific, relevant target groups covering the full range of potential users in the relevant health regulators, BCI and neuromuscular research communities. Each dissemination activity is tailored to the specific group and the message that shall be conveyed.

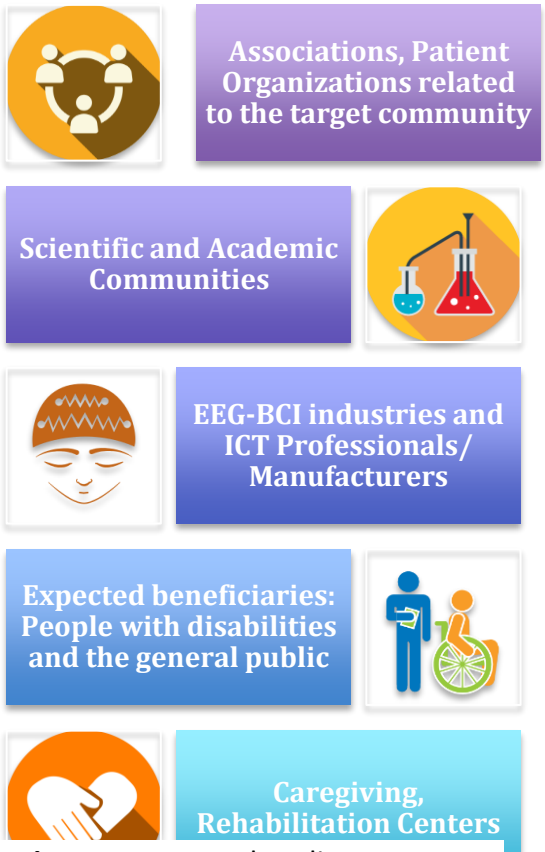


Figure 1: Targeted Audiences

With the purpose to optimise and ensure maximum impact and long-term sustainability of our research, it is important to identify all the different target groups to transmit the right information and message to the proper receiver. We

have identified broad categories (e.g. academia, industry, expected beneficiaries, etc.) to manage to get the communication message across to all members of MAMEM's target audience. In this respect, five main categories of dissemination targets have been identified for the project, consisting of (see also **Figure 1**): a) Associations and patient's organizations, b) Scientific and Academic Communities, c) EEG-BCI industries and ICT Professionals / Manufactures, d) People with disabilities, e) Caregiving and rehabilitation centres.

2.3 Dissemination Instruments

To specifically address target audiences according to their role, a wide variety of dissemination instruments and methods were leveraged. MAMEM dissemination plan foresaw a multi-channel dissemination approach. On the one hand, focusing on end-users calling for direct communication and focused discussions with the health regulators, ICT experts, industry and patient organizations, since they constitute the most prominent consumers of MAMEM technologies. On the other hand, addressing the public, which calls for using channels of wider reach such as workshops, conferences, and journal publications specialized in fields pertinent to the project, as well as media channels such as the press addressing the general public. Finally, MAMEM is disseminated via its Web site and its presence in major Web 2.0 services such as Facebook, Twitter, LinkedIn, and Google+. The following dissemination instruments were identified to implement this multi-channel approach (**Figure 2**).

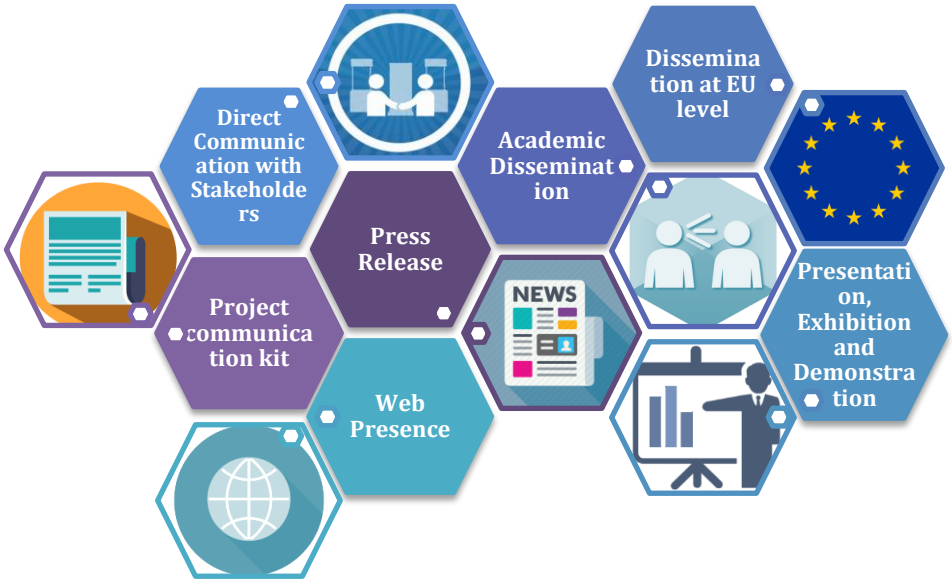


Figure 2: Overview of the MAMEM Dissemination Instruments.

2.4 Exploitation tracks

The general goal of every dissemination activity is to set the ground for obtaining direct or indirect benefits in a shorter or longer term. Towards this end, in D8.2 we have identified the following exploitation tracks that have been considered as most relevant in the context of MAMEM.

Attract clients: The MAMEM consortium includes two SMEs (SMI and EBNeuro) with the largest part of their revenue coming from their clients, either in the public or private sector. They generate revenue by selling software products or services under closed licences.

Scientific excellence: Partners with strong academic and research profile are also present in the MAMEM consortium with the largest part of their resources coming from exploiting their excellence. MAMEM offers a great opportunity for the academic and research partners to remain competitive, maintain their good reputation and turn their scientific excellence into an exploitable asset.

Networking: Either in the field of research or enterprise the communication with like-mind people sharing the same interests and working on similar problems is of outmost importance for every active organization. The participation in related forums, conferences, exhibitions and other relevant events is critical for disseminating the project objectives and sets the ground for future collaborations.

2.5 Dissemination Commitments

Based on the above each consortium partners was committed to undertake a number of dissemination activities that were reported in D8.2. **Table 1** is the cumulative table of all individual commitments. For clarity, it is important to note that at the time of writing this deliverable we are just over M24, corresponding to the end of the second year.

Table 1: Commitments made in deliverable D8.2

	MAMEM						
	Year 1		Year 2		Year 3		
	Semester I	Semester II	Semester III	Semester IV	Semester V	Semester VI	TOTAL
Dissemination plan (deliverables)	2	0	0	2	0	0	**4**
Project website	1	0	0	1	0	0	**2**
Communication Kit	1	0	0	1	0	0	**2**
Newsletters	0	5	4	5	4	5	**23**
Media communication, press releases	0	3	1	3	1	3	**11**
Audio-visual material (video)	0	0	2	0	1	1	**4**

Demonstration/participation in exhibitions/events	0	5	3	12	3	12	**35**
Social media posts	15	45	56	89	82	109	**396**
News posts	11	25	40	47	46	52	**221**
Publications in conferences/journals	0	5	4	11	7	12	**39**
Workshops/special sessions	0	3	0	4	1	4	**12**
Networking and clustering activities	2	4	3	5	3	6	**23**
Communication with potential clients	0	1	0	4 (23*)	1	3	**28**

* In D8.2 due to misconception of this instrument this number was set to 23 expecting that each individual participating in the trials will be a potential client. We have revised this number so as to correspond with the true intentions of all partners.

2.6 Impact indicators

However, apart from the commitment on what actions to undertake and when, in D8.2 we have also defined a number of indicators quantifying the achieved impact. In addition to identifying the nature of these indicators, we have (a priori) set the consortium target for each indicator quantifying the level that would be considered satisfactory for our project. **Table 2** provides an overview of the different dissemination activities, the overall dissemination objective, the associated impact indicator, the consortium target and the source/methodology to measure this indicator. Again it is important to notice that the consortium targets refer to the full duration of the project (i.e. 36 months), while at the time of writing this report we are on M24.

Table 2: Target Indicators by Consortium

DISSEMINATION ACTIVITY	OVERALL DISSEMINATION OBJECTIVE	INDICATORS	CONSORTIUM TARGET	SOURCE / METHODOLOGY
WEB	Dissemination channel to inform about the progress of the project, activities going on and related achievements	Views (per month)	800	WordPress analytics
		Downloads (publications, deliverables, open source modules, datasets, etc)	1000	WordPress and GitHub analytics
NEWS & NEWSLETTERS	Disseminate to our target groups the project's progress, achievements and activities	Number of Newsletter publications	20 (including partner-specific newsletters)	Project reporting
		News Posts	200	WordPress analytics

SOCIAL NETWORKS	Reach out the general audience and stimulate communication in the fields related to MAMEM	Twitter (representative followers)	200	Social account analytics
		Twitter dialogue (tweets)	300	Social account analytics
		Facebook (likes)	200	Social account analytics
		Facebook (people reached)	20000	Social account analytics
		LinkedIn (group members)	100	Social account analytics
		Total Posts	350	Social account analytics
TRIALS	Test and evaluate MAMEM's prototypes to end-users	Number of Clinical Trials	6 (=3x2)	Project reporting
		Patients taking part	63 (3x21)	Project reporting
		Care givers taking part	15 *(3x5)	Project reporting
CONF & EVENTS	Disseminate to our target groups in related events and identify commercial interest in our results	Number of events with project's presence	20	Project reporting
		Attendance (target groups)	10,000	Participant's list
WORKSHOPS	Disseminate to our target groups and get feedback on the scientific and commercial value of our results	Number of organized workshops	10	Project reporting
		Attendance (target Groups)	100	Participant's list
SCIENTIFIC DISSEMINATION	Diffuse scientific excellence and detect scientific interest in our results	Number of Publications	29	Project reporting
		Possible collaborations with the industry and/or SMEs	10	Project reporting
PRESS & MEDIA	General dissemination for reaching a wider audience and communicating the project's vision and objectives	Number of media publications (press releases & media communication)	10	Project reporting
		Audience reached	80,000	Estimated projections based on the media popularity

2.7 Monitoring mechanisms

Apart from soliciting the commitments and setting the goals, another important parameter for the successful implementation of a dissemination plan is the establishments of reliable monitoring mechanisms for tracking the undertaken activities. By looking at **Table 2** it is evident that are three main types of mechanisms for monitoring the dissemination activities and their impact: a) analytics services offered by wordpress, social media accounts, github, etc, and b) a project reporting mechanism where all partners can use to report about their activities.

Already on M4, we have made available to the consortium a google docs questionnaire [1]. Through a set of simple questions the goal of this questionnaire is to solicit the important pieces of

information about a certain dissemination activity. These questions refer to: a) details of the organization (i.e. name of the responder and company/institution), b) details about the event (i.e. type of the event, official title, date, place and url of the event), c) details about the impact (i.e. target group, dissemination instrument, purpose of the activity and exploitation pathway). **Figure 3** provides a indicative screenshot of the questionnaire that can be accessed through MAMEM's website[1], or directly through [1]. All partner were specifically instructed to fill-in this questionnaire immediately after performing a dissemination activity, allowing the leader of the dissemination task to monitor and assess the information in a timely manner. The information collected through this questionnaire has been the source for the dissemination activities reported in Section 3, and has also formed the reference basis for revising the activities to be undertaken within the next 12 months of the project's life cycle (until M36).

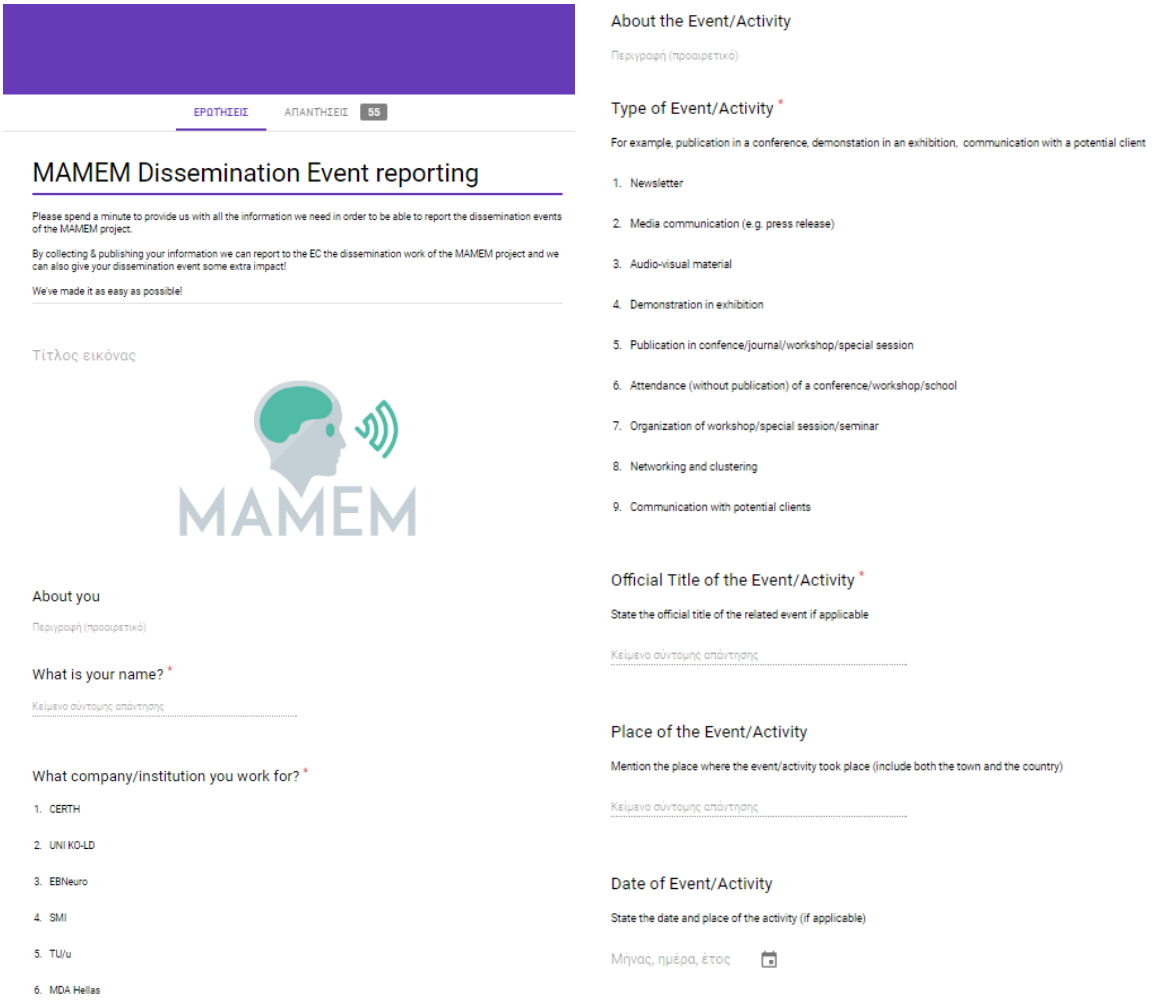


Figure 3: MAMEM Dissemination Event Activities Reporting Mechanism

2.8 Strategy for updating MAMEM dissemination plan

Our strategy for updating MAMEM's dissemination plan was to initially track and report on the dissemination activities undertaken by each partner and compare against its individual

[1] http://www.mamem.eu/results/dissemination/ (scroll down to the bottom of the page)

commitments as set out in D8.2. These activities were subsequently summarized into the tables of Section 3 so as to provide a clear view of what is our current status, with respect to the project visibility and impact, and where we would like to be in the end. Subsequently, all MAMEM partners were provided with the content of Section 3 along with an activity description template and were asked to update their commitments for the last year of the project (M25-M36). The updated plans are reported under Section 5, both per partner and project-wise.

3 Report on Dissemination Activities, assess their impact and compare against commitments

3.1 Report on the nature of the activities

As of M24, the MAMEM partners have already carried out a significant number of dissemination activities. In the following we provide an overview analysis of the undertaken activities, in terms of: a) the utilized dissemination instrument, b) the target group category, and c) the exploitation pathway.

In **Figure 4**, we categorize the dissemination activities based on the dissemination instrument. It is evident that the greatest share of the undertaken activities has been allocated to publications in conferences, journals and workshops. This is followed by the activities related to attending relevant venues, which are closely followed by the activities related to demonstration in exhibitions and networking/clustering. The organization of workshops has been also allocated with a non-trivial share of the undertaken activities, while the instruments of media communication and communication with potential clients take the smaller share of the pie. What becomes evident from this analysis is that during the first 24 months of the project the greatest share of our efforts has been allocated in raising awareness about our project and disseminating its initial results. As we enter into the final year of our project and with the developed technologies acquiring a higher level of maturity, we expect for the business-oriented activities (e.g. communication with potential clients) to increase.

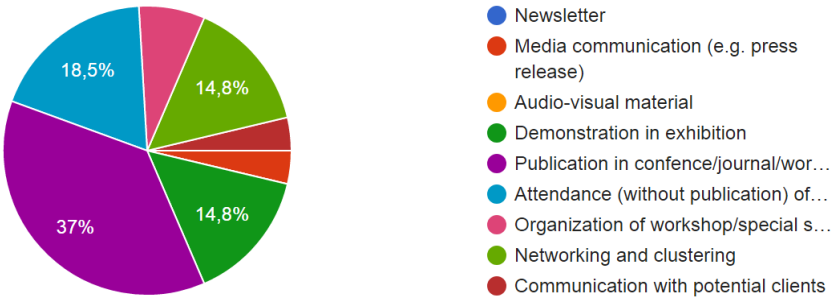


Figure 4: Type of the Event-Activity

In **Figure 5** all activities are analysed based on their target audience as indicated in the questionnaire by the partner undertaking the activity. We can see that the greatest share of the undertaken activities has been targeting the researchers in relevant fields, followed by people with disabilities and care-giving centers. Manufactures and developers still occupy a small share among the target audiences. In line with the previous findings, we can derive the conclusion that our dissemination efforts have been primarily biased on researchers. Nevertheless, as we progress further with the developed prototypes we expect for manufactures and developers to increase their share.

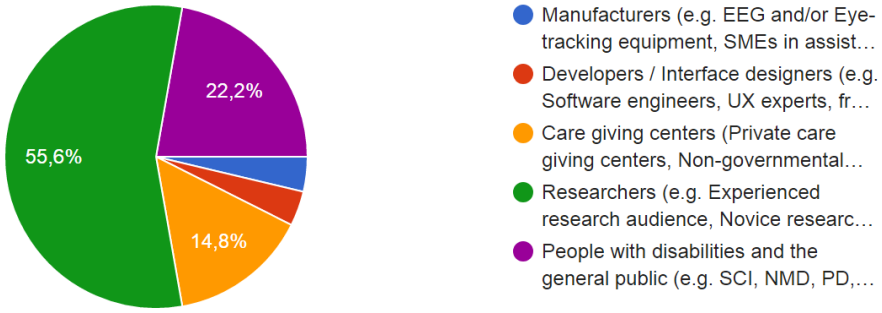


Figure 5: Target Group Category

Finally, in **Figure 6** we also analyse the undertake activities in terms of the exploitation track that has been declared in the questionnaire by each organization. In line with the previous results, the scientific excellence occupies the largest share of the pie, following by networking and attracting clients. Although the research aspect is also very strong in this pie, it is important to note that the exploitation track of attracting clients is also very prominently present, despite the fact that most of MAMEM developments are not in their final state.

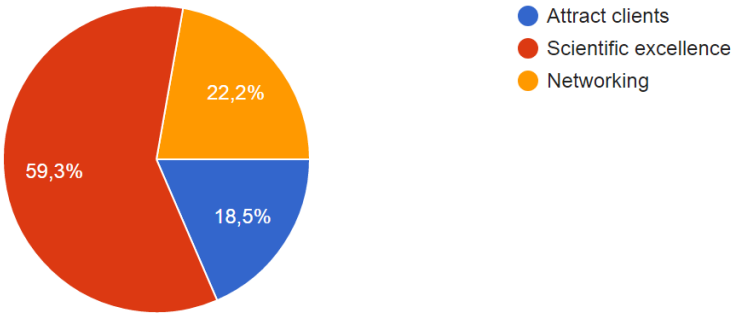


Figure 6: Exploitation Pathway

In the following we report about the undertaken activities and analyse the impact of each dissemination category separately.

3.2 Web Presence

The Internet is probably the most effective method to render a public image for individual or organizational entities not only over websites but also via social networks. The MAMEM website[2] has been one of the most active dissemination channels, updated regularly with both the project outcomes (e.g. deliverables, publications, datasets), as well as the project news. In assessing the overall impact of the project, the project's website is of paramount importance since it constitutes the main online spot for externals to understand the project and get familiar with its outcomes. For this reason we have made provisions to constantly monitor its traffic so as to better understand the dissemination activities that seems to draw most attention. For the purpose of monitoring the traffic we have relied on both Wordpress and Google analytics, which are powerful

[2] http://www.mamem.eu/

tools that can answer a variety of impact-related questions. Appendix A provides a list of links for MAMEM's on-line presence.

3.2.1 Report of Activities

The MAMEM web site is structured in five areas, including: a) Home, b) The Project, c) Results, d) Use Cases and e) News. The areas "The Project" and "Use Cases" have been rather static since they were meant to present key facts about the project. The "Home" has been devoted in presenting the latest news, as well as incorporating the project's important links (e.g. social networks, wiki page, github, etc). Finally the "News" has been the most active part of our website that has published an extended number of micro blog-posts discussing MAMEM's achievements, or other type of news relevant to the projects. Based on Wordpress analytics and the reporting questionnaire we may report the following: **a) News posts** until the time of writing this deliverables we have made 81 posts related to the project activities and other related content; **b) Newsletters** based on the reporting questionnaire we have made only one newsletter as presented in the table below, targeting the community of network and electronic media (NEM Initiative).

Partner	Activity Description	Date and Place	Target Group Category	Dissemination Instrument	Purpose	Measurable Impact Details	Exploitation Track
CERTH	NEM Contribution - Opening doors to Universal Access to the Media. The NEM Initiative (Networked and Electronic Media Initiative)	2/17/2016 e-mail	People with disabilities and the general public (e.g. SCI, NMD, PD, ALS, MS, etc). NEM community (http://nem-initiative.org)	Newsletter	Raise awareness	Visits / Views for web sites.	Networking and Clustering

3.2.2 Compare against commitments

In D8.2 each partner committed to have a number of dissemination activities related to the portal. The following table presents the achievements against the commitments.

	Year 1				Year 2				Year 3			
	Semester I		Semester II		Semester III		Semester IV		Semester V		Semester VI	
Project website	1	1	0	0	0	0	1	1	0	-	0	-
Newsletters	0	0	5	1	4	0	5	0	4	-	4	-
News posts	11	12	25	17	40	22	47	28	46	-	46	-

We can see from the table above that we have fulfilled our commitments in terms of developing the website during the first semester of the project and refine it during the 4th semester. We can also see that we have been rather active in generating news posts, although we lack a bit behind of our initial commitments. Finally, we have also missed the target of generating the promised newsletters. The reason behind the low number of newsletters was that during the execution of

the dissemination plan, we have decided to place more emphasis on generating micro-blogs and social media news that are far more appealing from the newsletters distributed through e-mail.

3.2.3 Impact Assessment

As already stated before, the main goal of the Website is to provide information about MAMEM to the widest possible audience, and for this reason it has been continuously updated with details, downloadable documents and news. In assessing the impact of these activities, we have relied on WorkPress Analytics installed on our site, that are able to provide us with: a) web site views, b) unique visitors, c) geographical distribution of visitors, d) top referrals, and e) popular pages. In the following we present and discuss the usage statistics of MAMEM web site.

Web site unique visits: In **Figure 7** we can see the web-site views during the duration of the project. We can see that during the first months of the project and until the end of 2015, the number of view was around approximately 450 per month. The situation has become a lot better in 2016 where despite the fluctuations in the number of visits there has been an increasing interest in our project, with an average number close to 600 visits per month. This interest has stabilized in 2017 with the average number of visits being around 851 visits per month, over the threshold of 800 visits that we have set in our impact indicators. Our goal is to stabilize the monthly visits over 800 until the completion of our project.

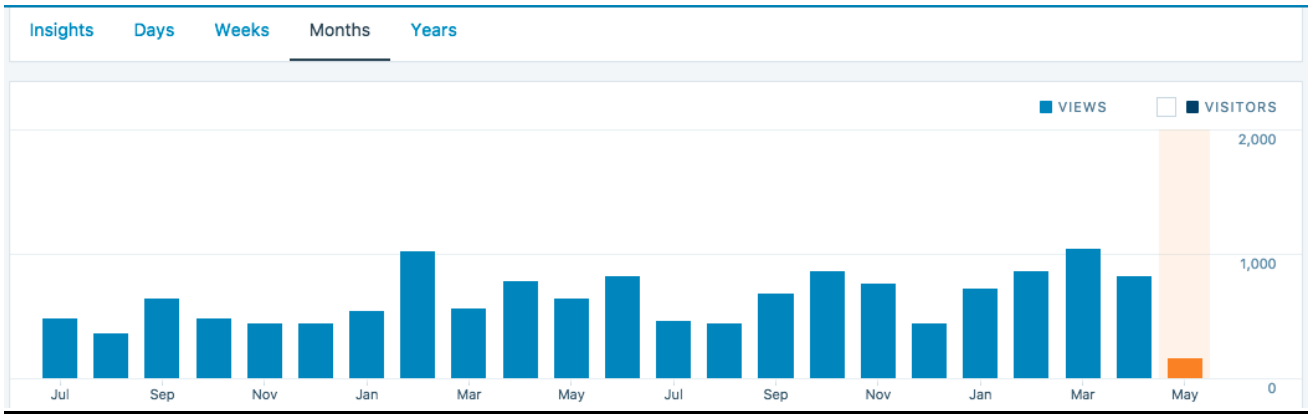


Figure 7: MAMEM web site unique visits

Web site unique visitors: Similar conclusions can be drawn **Figure 8** where the number of unique visitor per month is presented. We can see that after the slow start with an average of approximately 150 unique visitors per month in 2015. The number of unique visitors has grown to approximately 250 per month in 2016 and has stabilized over 300 (approximately 310) in 2017. As in the previous case our goal is to stay over 300 unique visitors per month until the completion of our project.

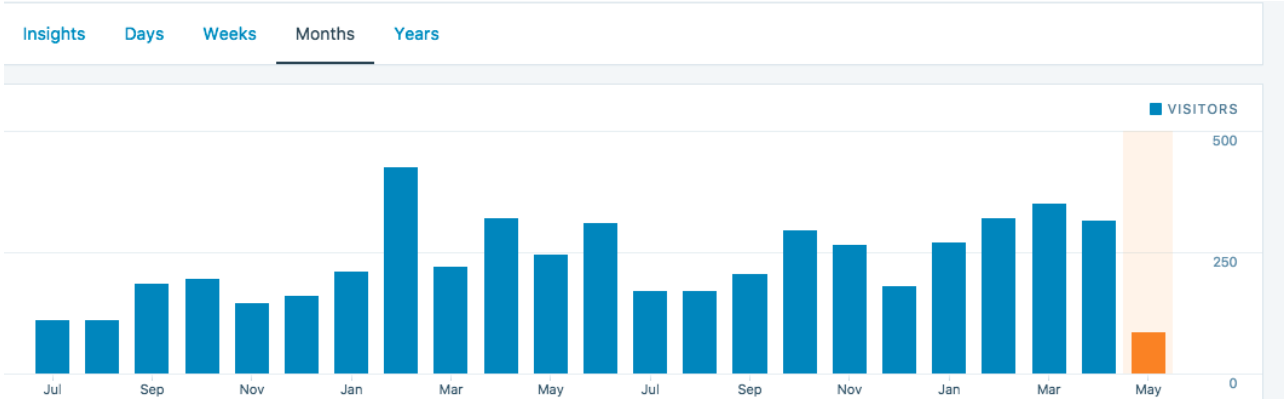


Figure 8: MAMEM web site unique visitors

Geographical distribution: In **Figure 9** we present the geographical distribution of the visits. We can see that the greatest share comes from Greece, which is the host country of the coordinator and two out of the three clinical sites. However, besides Greece we can see a rather extended geographical distribution around Europe (Germany, Netherlands, Italy), but also in United States and India, showing how the interest on our project has been growing world-wide.

Figure 9: Geographical distribution of visits

Page popularity: In **Figure 10** we can see the popularity of the different web pages of MAMEM web-site. What is interesting to derive from **Figure 10** is that apart from the Home Page, which is expected to be the most popular being the landing pages, it is the News Page that attracts most of the attention. This is clear evidence on the value of the micro blog-posts that are being generated by the members of the consortium. The value of this micro blog-posts has been also verified by observing daily peaks on web site visits at the day of their release.

Title		Views
Home	View	4,834
News	View	972
Abstract	View	602
Consortium	View	532
Datasets	View	525
Use Cases	View	485
Publications	View	470
Concept	View	394
Structure	View	349
Software	View	321
Home page / Archives	View	290
Deliverables	View	277
Objectives	View	275
Dissemination	View	242
MAMEM's 3rd meeting in Tel Aviv, Israel	View	210
Architecture	View	194
MAMEM makes publicly available it's first EEG dataset	View	162

Figure 10: Page Popularity

Channel Statistics: Finally, **Figure 11** provides the statistics of the top channels responsible for the generating the traffic going towards MAMEM sites. We can see that the greatest share of traffic comes through referrals, followed by social media and direct access. This in an important observation showing the value of social media channels, as well as any other printed material that leads to direct access.

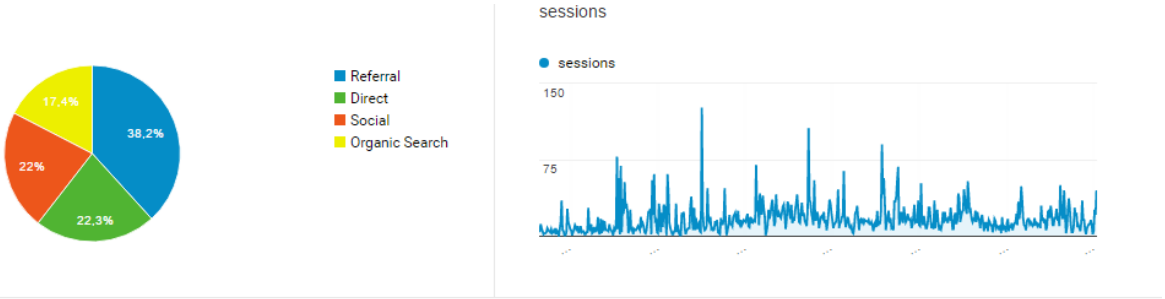


Figure 11: Top channel statistics.

Finally, in terms of comparing against the impact indicators that we have specified in our DoA [3] and D8.2, we can see the results on the following table. More specifically, the impact indicator related to MAMEM web site has been the number of unique visits and was specified at the number of 800. Currently, the average number of web-site visits across all months is calculated at 630, but as we have show previously this number has stabilize over 800 visits in 2017.

DISSEMINATION ACTIVITY	OVERALL DISSEMINATION OBJECTIVE	INDICATORS	CONSORTIUM TARGET		SOURCE / METHODOLOGY
WEB	**Dissemination channel to inform about the progress of the project, activities going on and related achievements**	Views (per month)	800	630	WordPress analytics

3.3 Social Media Presence (media posts & their engagement)

Apart from its web site the MAMEM consortium placed attention to the exploitation of popular and vastly populated social media as the means for further transferring the knowledge created within the project and thus establishing a network for interested stakeholders in the results and advancements produced by the project. In this scope, MAMEM social media channels such as Facebook, Twitter and LinkedIn have been established in order to engage a wider public in the project and its outcomes. Regarding social network presence, MAMEM has active accounts in:

- Facebook **(https://www.facebook.com/mamemeu/)**
- Twitter (**https://twitter.com/mamem**),
- LinkedIn **(https://www.linkedin.com/in/mamem/)**
- Google+ **(https://plus.google.com/u/0/109703352921059221390)**

3.3.1 Report of Activities

In spreading information across the social media channels MAMEM has adopted the following approach. Truncated versions of the micro blog-posts posted as news through our web-site, were also posted through our social media channels prompting the users to visit our web-site and read the micro-blog. This approach has been highly effective in creating the traffic towards our web-site without investing the increased amount of resources that is typically necessary for the micro-management of multiple social media accounts. Of course, apart from the micro blog posts our social media accounts have been also used to re-share/re-tweet interesting information coming from our social media networks. **Table 3**

Table 3 Activity and statistics of MAMEM social media networks

Social Media Presence				
Social Media	**Facebook**	**Twitter**	**Linked In**	**Google Plus**
Visits	Up to 70/per 28 days	Up to 60/per 28 days	-	-

Followers	-	52	46	13
Likes	167	-	-	-
Posts	94	112	81	81

Facebook: MAMEM's Facebook Like Page is probably the most active of its social networks sharing pictures, videos and updates on the Project activities as soon as they are available. It has grown a community of 167 likers that follow its activities and has already generated 94 posts (i.e. the 81 micro blog posts plus a number of additional posts from the community). Its visits may reach or exceed 70 views per month. (c)

Figure 12 presents some indicative statistics from Facebook Insights.

❖ **Statistics for 28 Days in Facebook Project's Account**

(a)

(b)

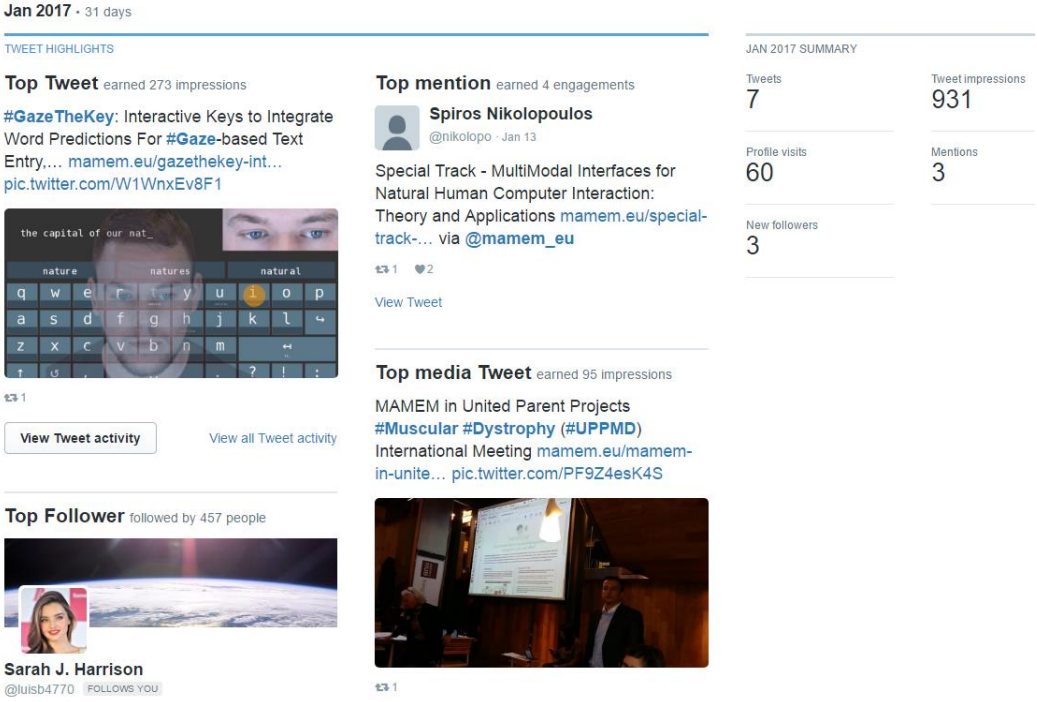
Published	Post	Type	Targeting	Reach	Engagement	Promote
04/11/2017 9:26 am	MAMEM reaching out to the general public in a street event for the #			243	43 29	Boost Post
04/10/2017 9:12 am	GazeTheWeb wins the WebForAll (#w4a) Accessibility Challenge in			222	28 16	Boost Post
04/08/2017 10:44 am	MAMEM joins #UnitedForParkinsons celebrating in the booth of #arist			329	14 14	Boost Post
04/05/2017 9:35 am	MAMEM successfully completed Phase I Trials for the cohort of neu			714	67 44	Boost Post
04/03/2017 10:22 am	MAMEM @10th Panhellenic Conference on Alzheimer's Disease &			209	24 24	Boost Post

(c)

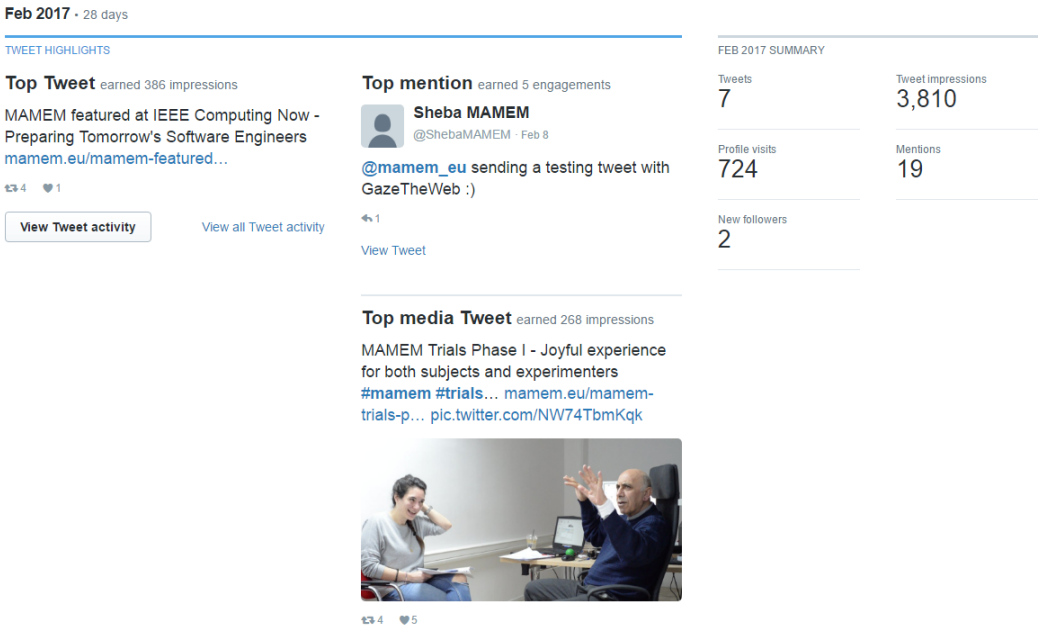
Figure 12: Indicative Facebook insights, a) Page view and likes per month, b) Total page likes (167), c) Information about the published posts.

Twitter: Twitter has been also one of the most active of MAMEM's social networks. Twitter has allowed us to build a community of 52 followers, receiving approximately 60 profile views per month. Compared to Facebook, Twitter has been more effective in re-circulating relevant information coming from its network, which explains the higher number of posts (i.e. 112 tweets). These tweets have earned more than 3.000 impressions over the last 28 days, which is close to average number received per month. **Figure 13** presents some indicative screenshots from twitter analytics.

- **Examples of Twitter Account Analytics**
  - *January 2017*



  - *February 2017*



- *March 2017*

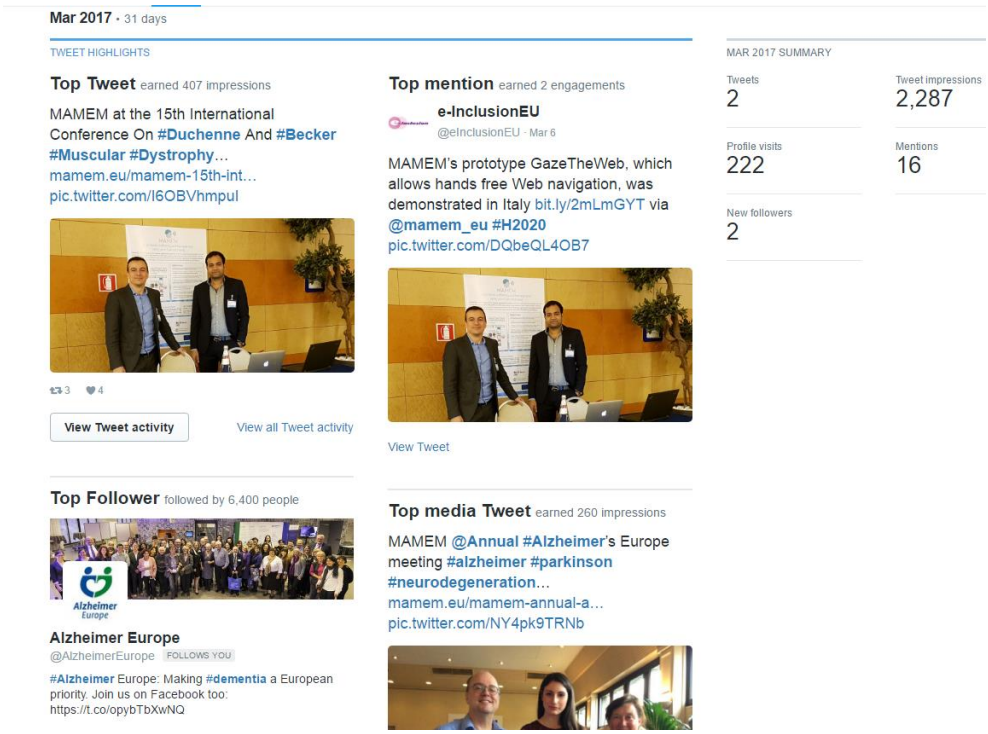


Figure 13: Indicative examples for Twitter Statistics

LinkedIn: Being a professional network LinkedIn has been less popular in terms of followers but more effective in reaching out to researchers and business-oriented individuals. LinkedIn has given us the opportunity to create a network of 46 professional contacts and make 81 posts (a number similar to the number of micro blog-posts made through the site). Although LinkedIn posts have been less popular than Facebook and Twitter, the have been more effective in reaching the impendent type of audience.

Google+: Finally, Google+ has been the last social network hosting MAMEM's activity. In contrary to the other networks, our activity in Google+ hasn't met particular success. We have managed to build a network of just 13 followers, which the posts made through this channel didn't manage to reach a wide audience. Therefore, it has been our decision to discontinue the use of this social media channel, as will be reflected in our updated dissemination plan.

3.3.2 Compare against commitments

In D8.2 we have made the following commitments in terms of the undertaken social media posts. We can see that although our activity has been growing, as anticipated, the achieved numbers cannot yet meet the initial expectations, calling the consortium members to intensify their efforts in terms of social network activity.

	MAMEM											
	Year 1				Year 2				Year 3			
	Semester I		Semester II		Semester III		Semester IV		Semester V		Semester VI	
Social media posts	15	55	45	78	56	70	89	84	82	-	82	-

3.3.3 Impact Assessment

A number of impact indicators related to social media activity has been specified in the DoA [3] and were also made part of the D8.2 dissemination plan. These indicators along with our achievements so far are presented in the following table. It is important to note that these indicators refer to the full project duration and color code has been used to indicate the progress rate achieved so far. More specifically, we have anticipated having 200 followers in twitter and by the time of writing this deliverable we have only 52 followers, indicating that we far behind our target in this respect. Concerning twitter dialogues, 300 have been envisaged having posted 120 in our twitter feed. Provided that we expect to intensify our efforts during the last year of the project, we consider this target to be within reach. Concerning facebook likes the consortium target has been set to 200, while 167 "likers" have been engaged so far, casting this target well on track. Similar is the case for the "people reached" within facebook where the 20000 that has been set as consortium target is already very close achievement (almost 18100 so far). The total number of member in our LinkedIn group has reached the number of 46, with the consortium target having been set to 100. Again, due to the expectation that are efforts will be intensified in the last year of the project, we consider the target of 100 to be within reach. Finally, the consortium target for the total posts in social media has been set to 350, while the current achieved number of social media post is 295 (see**Table 3**). We exclude the Google+ post due to our particularly small network. Therefore, we may consider that this consortium target can be easily achieved in the remainder of our project.

Table 4: Commitment and Consortium Target per activity

DISSEMINATION ACTIVITY	INDICATORS	CONSORTIUM TARGET	
SOCIAL NETWORKS	**Twitter** (representative followers)	200	52
	Twitter dialogue (tweets)	300	112

	Facebook (likes)	200	**167**
	Facebook (people reached)	20000	**18103**
	LinkedIn (group members)	100	**46**
	Total Posts	350	**287**

From the table above it becomes evident that the weak point of our social media activities so far relates primarily to Twitter and partly to LinkedIn. In intensifying our efforts with respect to twitter we plan to identify a set of keywords (along with hashtags) that would be appropriate for reaching our target groups. Subsequently, we plan to make tweets using these hashtags so as to attract followers through MAMEM tweets. Our goal will be to have an at least weekly Twitter activity, sharing news and events related to MAMEM topics, so as to be considered as an influential source, worthy to be followed.

With respect to LinkedIn our objective will be to follow more groups and participate in more discussions, as well as initiate MAMEM-related discussion that will be moderated by one of MAMEM Partners.

3.4 Communication

3.4.1 Report of Activities

A number of instruments have been specified to facilitate MAMEM communication activities. In the following we present these instruments, together with the consortium commitments as specified in our dissemination plan, as well as our assessment about the achieved impact.

Communication Kit: The project communication kit is composed of a set of electronic and printed documents that every partner can use to communicate the project aim, vision and achievements, depending on the circumstances. MAMEM team has designed different printed or downloadable tools such as flyer, poster and factsheet with the intent to distribute or expose them during events, workshops and conferences to reach relevant target groups. More specifically, MAMEM's communication kit is composed of a Leaflet, a poster and a factsheet that have been made available as part of D8.2 and downloadable through our web-site[3]. In revising MAMEM's communication kit as part of D8.4 we have enhanced this kit with a presentation about the project, as well as a concept video presenting the project's main objectives and achievements so far.

Media communication and press releases: Press releases and media interviews are a good way to reach the general public. Press releases are focusing on presenting the Project objectives; describing its developments and outcomes. The aim of press releases is to promote MAMEM activity, generate curiosity and visibility, as well as drive interested parties and general public to look for additional information on the Website, on social media channels or content sharing platforms. The nature of this dissemination instrument, to actually broadcast the project achievements into a wide range of targeted users, has proven very effective in setting the ground

[3] http://www.mamem.eu/results/dissemination/

for other, more direct, dissemination activities. More specifically, the MAMEM consortium has undertaken the following communication activities.

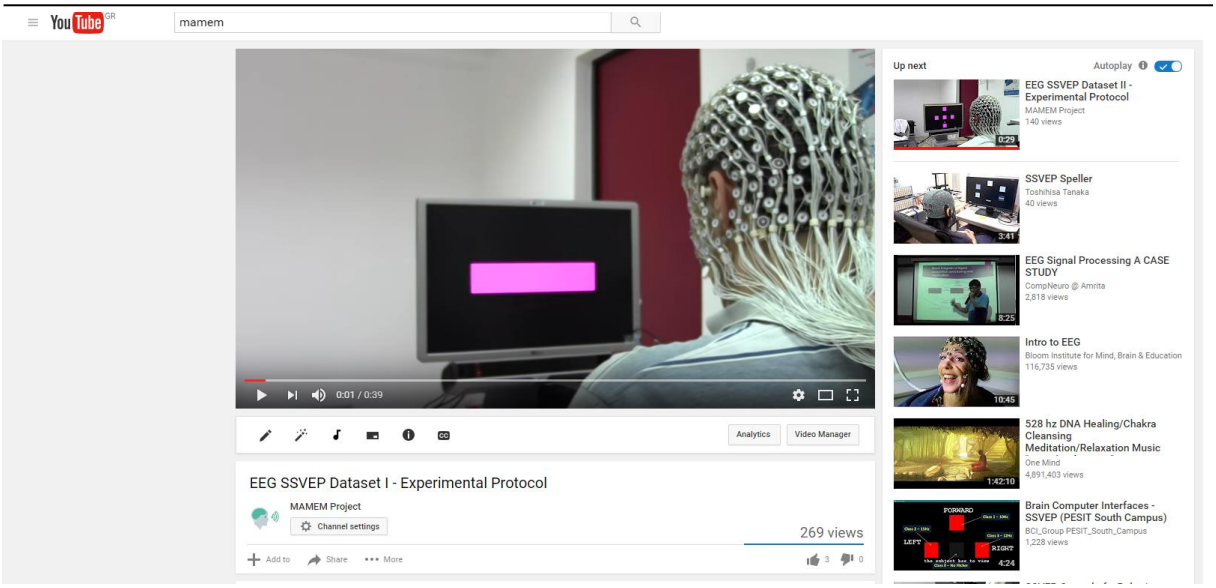
Table 5: Report of Communication Activities

Partner	Activity Description	Date and Place	Target Group Category	Dissemination Instrument	Purpose	Measurable Impact Details	Exploitation Track
UNI KO-LD	IEEE Computing Now	15/20/2017 Computing Now Issue	Researchers (e.g. Experienced research audience, Novice research audience).	Press Release	Foster technology uptake, Diffuse the scientific and technological achievements	Visits / Views for web sites.	Scientific excellence
CERTH	ICT2015 is the largest event organized by the EC and attracts a huge number of related researchers.	20/10/2015, Lisbon Portugal	Researchers from the ICT domain	Factsheet, Leaflet	Raise awareness	7000 attendees	Networking
CERTH	RRI-ICT event. MAMEM's objective was to identify what is considered responsible research.	7/8/2015, Brussels, Belgium	SSH owners, RRI enabling projects, ICT projects, project officers and the RRI ICT hub	Factsheet	Define responsible research and innovation	150 attendees	Networking
AUTH	Street Event for the National Day Against Parkinson Disease	4/8/2017 Thessaloniki, Greece	People with disabilities and the general public (e.g. SCI, NMD, PD, ALS, MS, etc) and general audience	Poster, Leaflet	Raise awareness, Reach out to the end-users	300 attendees	Scientific excellence

Audio-visual material (video): Until now we have published 8 videos under MAMEM's youTube channel[4]. Two of them demonstrate the SSVEP experimental protocols undertaken in our lab, while the other four are related to GazeTheWeb browser. Finally, as part of D8.4 we have released the first MAMEM's official video, presenting MAMEM's main objectives and goals, as well as the achievements of our first phase trials. In the following we present, screenshots and urls of our videos.

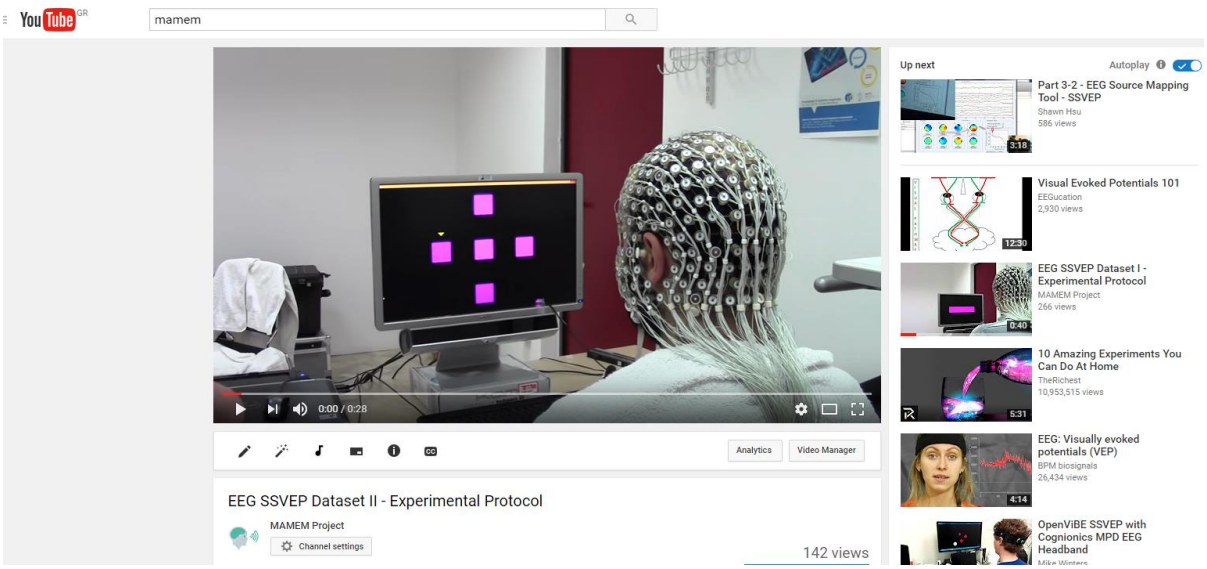
1. *EEG SSVEP Dataset I-Experimental Protocol Video*

[4] https://www.youtube.com/channel/UCCtqa6MWRoqSj4mdOq4KQqQ



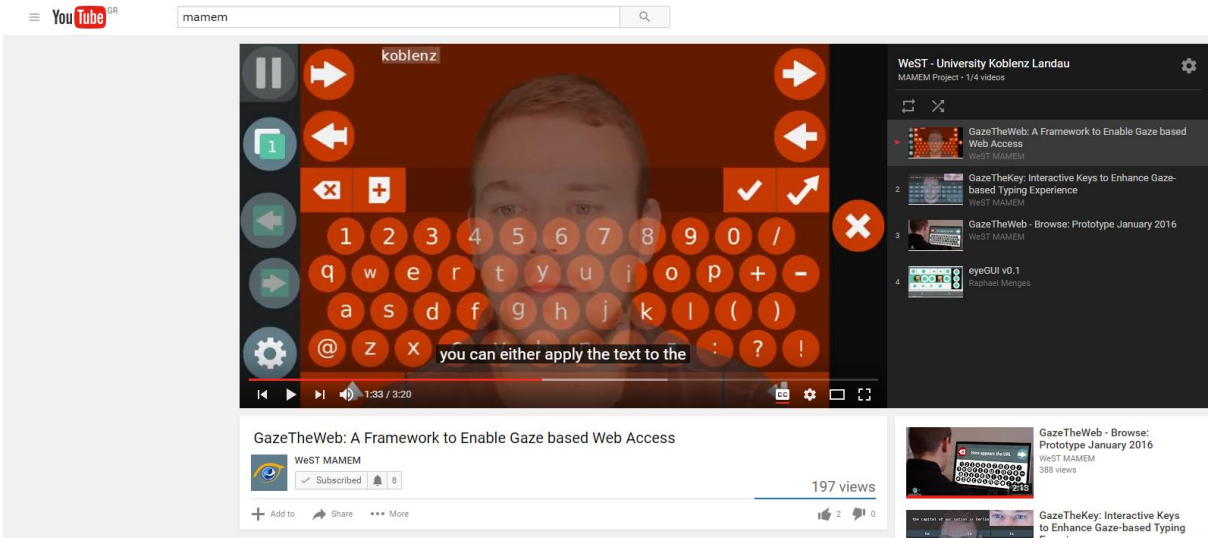
https://www.youtube.com/watch?v=8lGBVvCX5d8

2. *EEG SSVEP Dataset II-Experimental Protocol Video*



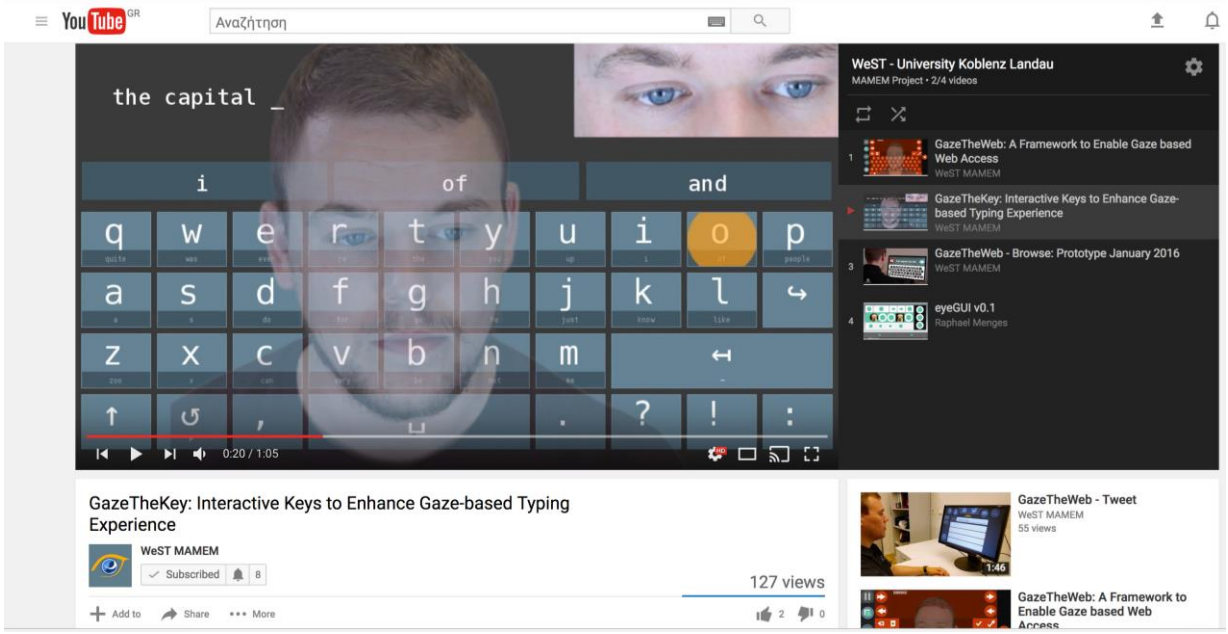
https://www.youtube.com/watch?v=xnjfuqRtAgE

3. *GazeTheWeb: A FrameWork to Enable Gaze based Web Access*



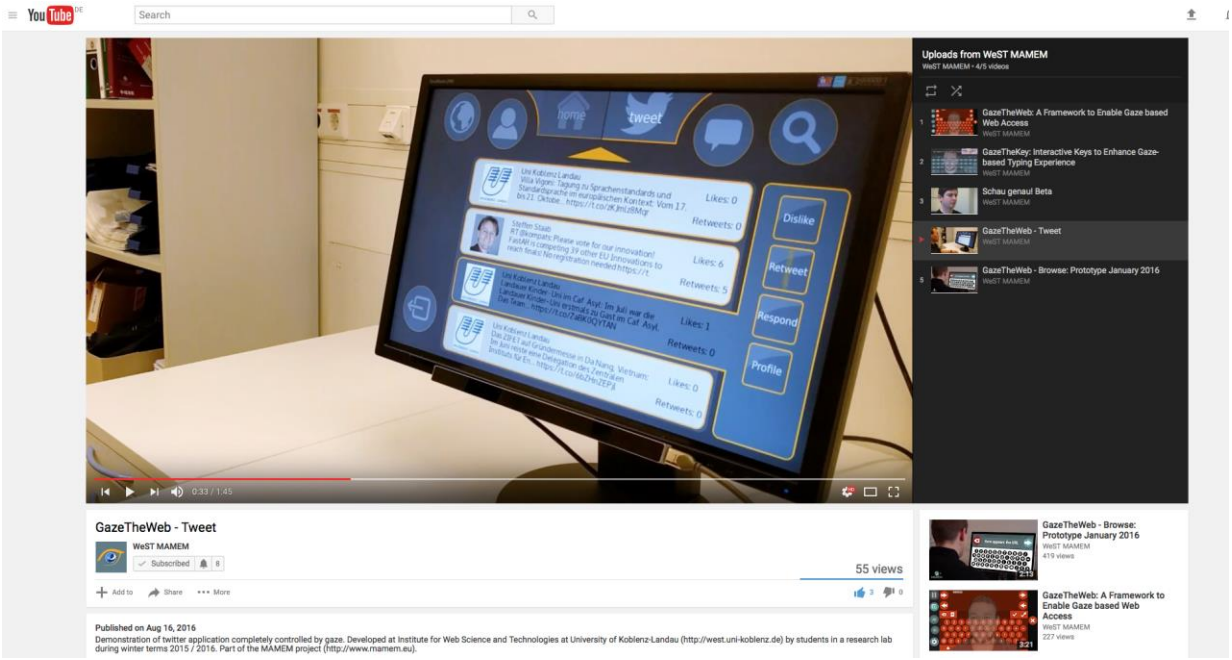
https://www.youtube.com/watch?v=x1ESgaoQR9Y&list=PLKqlgpGlT9FrE1RBSRy-K40afGKCKAAW7

4. *GazeTheKey: Interactive Keys to Enhance Gaze-based Typing Experience*



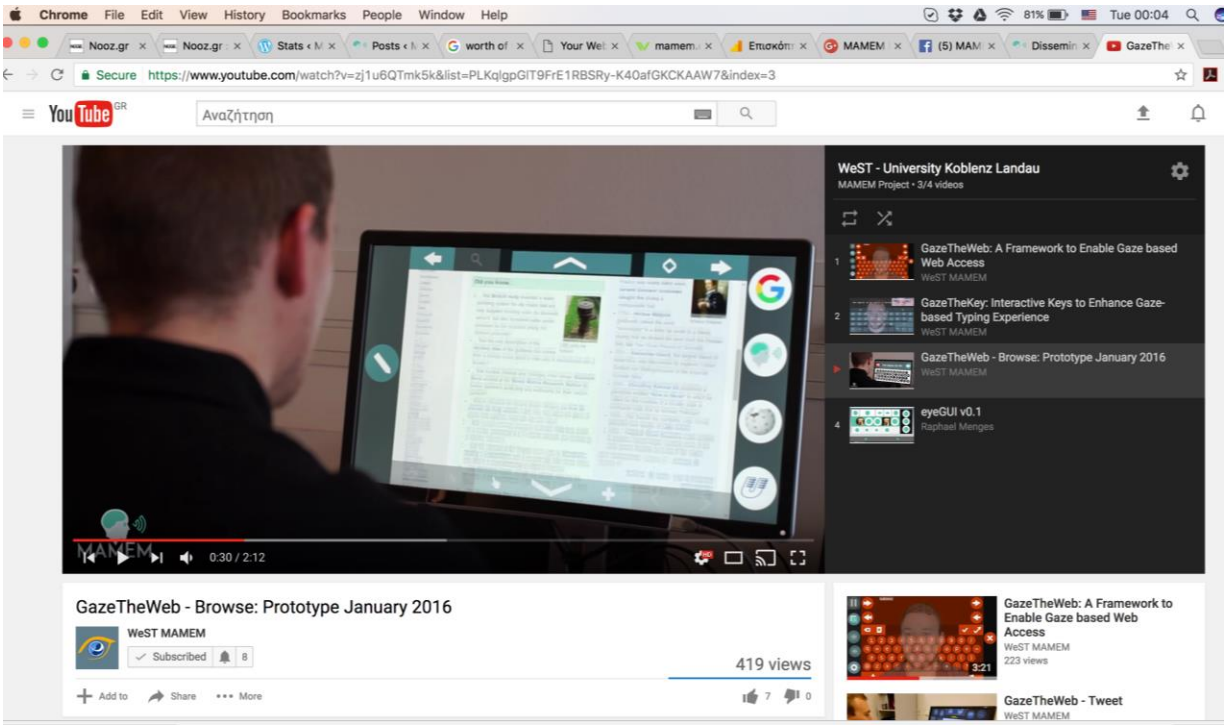
https://www.youtube.com/watch?v=-UDDTJHBPVA&list=PLKqlgpGlT9FrE1RBSRy-K40afGKCKAAW7

5. *Eye-Controlled Twitter application*



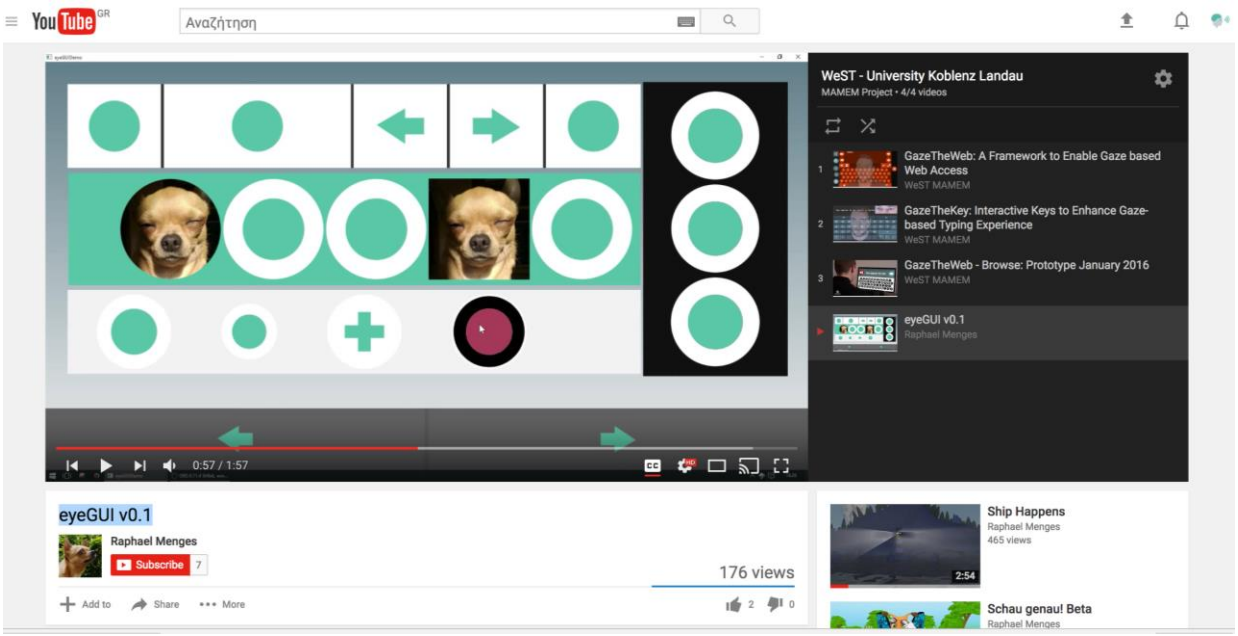
https://www.youtube.com/watch?v=NQQfB7nf3qw&list=UUiM5FSmeFyeU1s4tj_e794Q&index=4

6. *GazeTheWeb - Browse: Prototype January 2016*



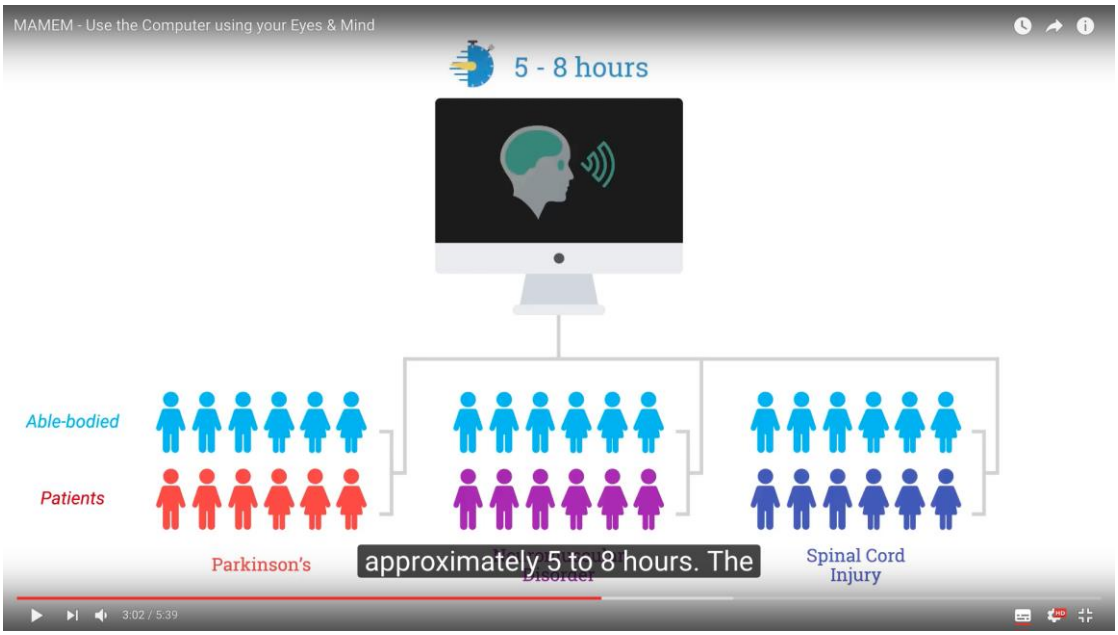
https://www.youtube.com/watch?v=zj1u6QTmk5k&list=PLKqlgpGlT9FrE1RBSRy-K40afGKCKAAW7&index=3

7. *eyeGUI v0.1*



https://www.youtube.com/watch?v=niMRX65E7IE&index=4&list=PLKqlgpGlT9FrE1RBSRy-K40afGKCKAAW7

8. *MAMEM Concept Video – Phase I Trials*



https://www.youtube.com/watch?v=42yGmr3NE0k

3.4.2 Compare against commitments

In the following table we present the commitments that have been made as part of D8.2 in the time range of M24, against the actual activities.

Activity	CERTH	UNI KO-LD	EB-Neuro	SMI	TU/e	MDA	AUTH	SHEBA	Accomplishment
Communication Kit	2/2	-	-	-	-	-	-	-	2/2
Media Communication, Press Releases	-/2	1/-	-	0/2	-	0/3	-	-	1/7
Audio-visual material (video)	3/1	5/-	-	-	-	0/1	-	-	7/3

In the table above we can see that the activities related to the communication kit have been successfully undertaken by CERTH with the delivery of D8.4. We can also see that the commitments that were made in terms of media communication and press releases haven't been met, so far. We hope that with the release of MAMEM's concept video we will be given more opportunities to appear in the media press. Finally, we have well exceeded our commitments with the generation of audio-visual material reaching up to 7, instead of 3 that were foreseen in our original plan.

Due to the effectiveness of press releases and media interviews in working as a preparatory mean for other, more direct, dissemination activities we plan to make the use of this instrument more intensively from now on. More specifically, we plan to generate press releases with respect to Phase I trials, as well as the trials that are planned for the second half of the project. We will also seek for any opportunity to talk about the MAMEM achievements in public media and the press.

3.4.3 Impact Assessment

In assessing the impact of the activities related to communication we have set the following targets for the full duration of the project. As already mentioned we are lucking behind in terms of the number of media publications and press releases since we have done only 1 out of the 10 envisaged of the full project duration. Similarly, given that only one such activity has been performed it is impossible to estimate the audience reached through this dissemination instrument. However, we have done rather well with the number of views attracted by our audio-visual material.

Table 6: Commitment and Consortium Target per activity

DISSEMINATION ACTIVITY	INDICATORS	CONSORTIUM TARGET	
PRESS & MEDIA	**Number of media publications (press releases & media communication)**	10	**1**
	Audience reached	80.000	**-**

	Views (videos, datasets, etc)	2000	**1377**

Indeed, in the following table we can see the number of views for all MAMEM videos as provided by YouTube. This number has already reached the level of 1377 and is expected to grow significantly after releasing MAMEM concept video.

Video	Views (30/04/17)
EEG SSVEP Dataset I-Experimental Protocol Video	282
EEG SSVEP Dataset II-Experimental Protocol Video	146
GazeTheWeb: A FrameWork to Enable Gaze based Web Access	227
GazeTheKey: Interactive Keys to Enhance Gaze-based Typing Experience	127
GazeTheWeb - Browse: Prototype January 2016	419
eyeGUI v0.1	176
Total	**1377**

3.5 Open source software and datasets

Another very important dissemination goal set by MAMEM was to develop an ecosystem where externals developers could build their own tools based on the interaction paradigms offered by MAMEM, and researchers could build their own algorithms based on MAMEM's datasets and methodologies. Towards this goal, MAMEM has made provisions to make its code available as open source through Github and publish its datasets in open access platforms for scientific research.

3.5.1 Report of Activities

In the following we report on the activities that have been undertaken for creating MAMEM's ecosystem.

Source Code in Github Repository:

In reaching out to the community of developers we have decided to make our source code public under GitHub. More specifically, we have created a MAMEM organization[5], which allow us to put multiple repositories under a common brand. Until now we have made available 5 code repositories that are also linked through our web-site[6]. In the following table we list these repositories along with traffic related information for the last 14 days. By looking at the table below we may draw the following conclusions. Three out of the five pieces of software that has

[5] https://github.com/MAMEM

[6] http://www.mamem.eu/results/software/

been released as open source, are too project-specific to be used by developers and researchers outside MAMEM. These are: a) the "eyeGUI" library, which is the core library underlying GazeTheWeb, b) the "MAMEM-platform", which is the infrastructure for multi-modal signal capturing, and c) the "Prototype interface applications", which is the training software that has been developed for the purposes of MAMEM Phase I trials. In these cases, there hasn't been any engagement from the community. However, the community has decided to engage with the other pieces of software. Indeed, we can see that the "eeg-processing-toolbox", which is a toolbox of EEG related algorithms has received more than 260 view by 76 unique visitors. This toolbox has been specifically designed to be modular and easy to use, addressing the community of novice EEG researchers. Similarly, the GazeTheWeb – Browser has received in the past two weeks around 30 views by 19 unique visitors. The GazeTheWeb – Browser has been also designed to easily enable the addition of new interaction elements and addresses the community of developers for multi-modal interfaces. The general conclusion that we can derive from this table is that the "eeg-processing-toolbox" and the "GazeTheWeb – Browser" are leading the creation of MAMEM ecosystem, which is expected to grow significantly during the last year of the project.

Open Source Software		Views (14 days)	Unique Visitors (14 days)
eeg-processing-toolbox	Matlab toolbox that has been made public for suppring experimentation in EEG signals generated using a SSVEP-based protocol. It follows a modular architecture that allows the fast execution of experiments of different configurations with minimal adjustments of the code. The implemented experimental pipeline consist of five parts each of them receiving an input from the previous part and providing an output to the next part. These parts consists of: a) Preprocessing, b) Feature Extraction, c) Feature Selection, d) Classification and e) Evaluation.	265	76
eyeGUI	eyeGUI library enables one to load, manipulate and render user interfaces for eyetracking input defined in xml files describing layouts. To use this library, there is a function based interface in a single header which requires the usage of C++11 and OpenGL 3.3 or higher. Layouts are thought as overlay for your specific application for interaction with the gaze input from an eyetracker, however one can create a whole application using layouts.	-	-
GazeTheWeb - Browse	'GazeTheWeb – Browse' is an application interface that allows gaze controlled browsing of web pages. The application is based on the Chromium Embedded Framework (CEF), and allows the users to operate a Web browsing environment using their eye movements. Essential features like tabbed browsing,	29	19

	scrolling, navigation and text input are functional in the current release. 'GazeTheWeb – Browse' analyzes the DOM tree structure to parse and display custom **eyeGUI** overlay which enables direct interaction with the webpage.		
MAMEM-platform	MAMEM platform includes the necessary components for connecting sensor devices to the system and for collecting the generated signals in a synchronised manner. The supported sensor devices (EEG, Eye-tracking and GSR) constitute the base level of the platform and instructions on how to setup the system and install the SDKs of all different devices are included.	-	-
Prototype Interface Applications	A web app that leverages gamification techniques, to allow users familiarise with the use of an eye-tracker, as well as for learning how to use the GazeTheWeb-Browser. Persuasive design methodologies have been also employed in the development of these prototype interface applications.	6	4

MAMEM GitHub Organization: **https://github.com/MAMEM**

Publicly available datasets:

Apart from the source code, and according to our data management plan specified in M6, we have also made publicly available a number of datasets. More specifically, we have decided to make our datasets available in both FigShare (i.e. an open access platform oriented towards scientific research) and PhysioNet (i.e. an open access platform that is most popular in the medical domain). The publicly available datasets have been also linked through our web-site[7]. The table below lists the datasets that have been made publicly available along with their view and downloads as provided by the sharing platforms. It becomes evident through this table, that the datasets that have been made available by MAMEM has been very-well received by the scientific community bring the total number of views to 2406 and the total number of downloads to 1524.

FigShare Sharing Platform			
Dataset	**Links**	**Views (30/04/17)**	**Downloads (30/04/17)**
EEG SSVEP Dataset I	**https://figshare.com/articles/MAMEM_EEG_SSVEP_Dataset_I_256_channels_11_subjects_5_frequencies_/2068677**	1483	886

[7] http://www.mamem.eu/results/datasets/

EEG SSVEP Dataset II	https://figshare.com/articles/MAMEM_EEG_SSVEP_Dataset_II_256_channels_11_subjects_5_frequencies_presented_simultaneously_/3153409	394	307
EEG SSVEP Dataset III	https://figshare.com/articles/MAMEM_EEG_SSVEP_Dataset_III_14_channels_11_subjects_5_frequencies_presented_simultaneously_/3413851	529	217
TOTAL		**2406**	**1410**

PhysioNet Sharing Platform			
Dataset	**Link**	**Views***	**Downloads***
Experiment 1 Experiment 2 Experiment 3	https://physionet.org/physiobank/database/mssvepdb/	N/A	N/A

* no analytics information is provided by PhysioNet

Finally, it is important to mention that our Phase I trials resulted in a particularly rich dataset of time-stamped multi-modal signals (i.e. eye-gaze, EEG, GSR and HR) that can be synchronized not only with each other but also with the events and interactions that were taking place in the screen. It is within our immediate intentions to release this dataset as open source along with a technical paper providing the necessary details.

3.5.2 Impact Assessment

In terms of assessing the impact of our activities related to eco-system building, the only target that has bee specified in our dissemination plan relates to the number of downloads earned by the project outcomes. By counting only the downloads achieved by the 3 EEG datasets, we can see that with a number of 1524, we are already over our consortium target.

DISSEMINATION ACTIVITY	INDICATORS	CONSORTIUM TARGET	
Open Source	**Downloads (publications, deliverables, open source modules, datasets, etc)**	**1000**	**1410**

3.6 Demonstration/participation in exhibitions/events

3.6.1 Report of Activities

Another way to present the project objectives and achievements is to give talks and make presentations in related venues, as well as to setup demonstrators in exhibition booths or stands. Due to its special requirement in creating an eco-system to implement novel and multimodal BCIs for people with motor disabilities, the successful presentation of MAMEM constitute an important pre-requisite for the overall success of the project since they are tightly connected with the take-up of the developed technology. This instrument has been extensively used by the consortium members with an emphasis on venues related to neurodegenerative diseases, neuromuscular

disorders and EEG-BCI technologies. The table below summarizes the undertaken activities, as reported by the project partners through the questionnaire infrastructure.

Partner	Activity Description	Date and Place	Target Group Category	Dissemination Instrument	Purpose	Measurable Impact Details	Exploitation Track
EBNeuro	Arab Health. Presentation of MAMEM activity to visitors in order to raise awareness and diffuse achievements, so that in a more mature stage we could have potential clients.	1/25/2016 Dubai	Care giving centers (Private care giving centers, Non-governmental organizations (NGOs), Public hospitals and medical centers). dealers, hospitals professionals, caregivers, fdoctors, patients	Face-to-face communication, Booth in exhibition / conference	Raise awareness	-	Attract Clients, Demonstration in exhibition
EBNeuro	CMEF 2016 Spring Edition	4/17/2016 Shanghai, China	Manufacturers (e.g. EEG and/or Eye-tracking equipment, SMEs in assistive technologies, medical equipment). Manufacturers, dealers, researchers, and professionals of Medical sector	Face-to-face communication, Leaflet	Raise awareness	6800 exhibitors and 210.000 visitors from 150 countries	Attract clients
UNI KO-LD	EINST e.V. Alumni Meet	4/30/2016 University of Koblenz-Landau, Campus Koblenz	People with disabilities and the general public (e.g. SCI, NMD, PD, ALS, MS, etc). Mostly General Public students and researchers of University of Koblenz.	Presentation / Demonstration	Raise awareness	-	Networking
UNI KO-LD	Nacht der Technik	11/4/2016 Metall- und Technologie zentrum der Handwerks kammer Koblenz, Germany	People with disabilities and the general public (e.g. SCI, NMD, PD, ALS, MS, etc) and General audience	Face-to-face communication, Presentation / Demonstration	Raise awareness, Reach out to the end-users, Check whether Browser can run for several hours without restart.	About 10.000 visitors	Networking
UNI KO-LD	Tag der Computervisualistik. GazeTheWeb-Browse was presented both in a fast-forward session and in a booth, where people could navigate	7/8/2016, Universtität Koblenz-Landau, Campus Koblenz, Germany	People with disabilities and the general public (e.g. SCI, NMD, PD, ALS, MS, etc). Students, people from industry.	Face-to-face communication, Presentation / Demonstration, Booth in exhibition /	Raise awareness, Diffuse the scientific and technological	-	Attract clients, Scientific excellence

	through the web with their gaze.			conference	achievements		
UNI KO-LD	Web For All 2017, 11th TPG Web Accessibility Challenge 2017. GazeTheWeb received a highly positive response for its usability and impact in the field of Web accessibility, and was adjudged as the winner of the 11th TPG Web Accessibility Challenge 2017.	04/07/2017 Perth, Australia	Researchers (e.g. Experienced research audience, Novice research audience).	Demonstration (Awarded!!)	Raise awareness, Diffuse the scientific and technological achievements	-	Scientific excellence
UNI KO-LD	15th International Conference On Duchenne And Becker Muscular Dystrophy	2/18/2017, Rome	People with disabilities and the general public (e.g. SCI, NMD, PD, ALS, MS, etc).	Face-to-face communication, Presentation / Demonstration, Booth in exhibition / conference	Raise awareness, Diffuse the scientific and technological achievements	600 attendes	Reach out to the end-users
CERTH	Researchers' Night, Thessaloniki - Greece	9/30/2016 Thessaloniki, Greece	People with disabilities and the general public (e.g. SCI, NMD, PD, ALS, MS, etc) and general audience	Face-to-face communication, Presentation / Demonstration, Booth in exhibition / conference	Raise awareness, Reach out to the end-users	approximately 3000 people	Attract clients, Scientific excellence
CERTH	High-school visit to CERTH. MAMEM's main objectives and the work done so far were presented to a group of high school students at the facilities of CERTH. The EEG signal acquisition based on Steady State Evoked Potential (SSVEP) stimulation was demonstrated.	11/6/2015 Thessaloniki, Greece	People with disabilities and the general public (e.g. SCI, NMD, PD, ALS, MS, etc) and high-school students	Face-to-face communication, Presentation / Demonstration	Raise awareness, Reach out to the end-users	20 students	Attract clients, Scientific excellence
MDA Hellas	UPPMD Semi-annual meeting with the DMD Patient organizations covering US and EMEA. The directors of the major international patient organizations in US and EMEA were informed about the	11/13/16, London, UK	People with disabilities and the general public (e.g. SCI, NMD, PD, ALS, MS, etc).	Presentation / Demonstration	Raise awareness, Reach out to the end-users, Diffuse the scientific and technological achieveme	25+ attendees from the 15+ major international patient organizations in US and EMEA	Organization of workshop/special session/seminar

	MAMEM project and the development stage we are in the moment.				nts		
AUTH	Street Event for the National Day Against Parkinson Disease. In the occasion of the National Day Against Parkinson disease MAMEM had the opportunity to inform the general public about the objectives and the achievements of the project. The material was distributed in a street	4/8/2017 Thessaloniki, Greece	People with disabilities and the general public (e.g. SCI, NMD, PD, ALS, MS, etc) and general audience	Booth in exhibition	Raise awareness, Reach out to the end-users	300 attendees	Scientific excellence

3.6.2 Compare against commitments

From the aforementioned table it becomes evident that the instrument of Demonstation/Participation in Exhibitions/Events has been employed in many of the dissemination activities performed by MAMEM partners. This is because making presentations and setting-up demos is the natural way for an organization to disseminate its work, independently of its nature (i.e. SME, research organization or academic institution). In the table below we provide the commitments that have been made as part of D8.2 against the ones that have been achieved until M24. We can see that CERTH and UNI KO-LD did better than promised. EBNeuro and MDA Hellas have used this instrument but they haven't fully achieved the promised number, while TU/e and AUTH are lucking behind compared to what was promised in their original plan.

CERTH	UNI KO-LD	EBNeuro	SMI	TU/e	MDA HELLAS	AUTH	SHEBA	Accomplishment/ Commitment
2/1	5/2	2/5	-	0/1	1/2	1/9	-	11/20

3.6.3 Impact Assessment

These activities are a good method also to reach out to other international projects (H2020 and others). Participating and contributing in conferences – both actively by presenting MAMEM own results, or as an audience member – support the knowledge sharing and encourage the incorporation of MAMEM research achievements into the work of other scientists and technology experts, or promote a joint research and publication activity with other actors of BCI research. In terms of impact assessment the consortium target that has been set in D8.2 for this type of dissemination activity relates to the number of event the project's presence, as well as to the number of attendants. We can see in the following table that we have already attended 11 out of the 20 promised events, while the number of attendants participating in these events is estimated at the level of 20760, well beyond our target. In the remainder of the project we plan to continue

using this instrument placing more emphasis on business-related events, hosting MAMEM's potential end-users.

DISSEMINATION ACTIVITY	INDICATORS	CONSORTIUM TARGET	
CONF & EVENTS	Number of events with project's presence	20	11
	Atendance (target groups)	10.000	20.760

3.7 Publications in conferences/journals

3.7.1 Report of Activities

The scientific achievements of MAMEM have been also disseminated through a set of publications that were in-line with the initial dissemination planning and the strategic role of each partner of the MAMEM Consortium. Below is a list of the scientific publications that have been acknowledged to MAMEM. During the first year and second of the project there have been reported 18 related activities under this instrument that are also linked through our web-site[8]. The following table (**Table 7**) summarizes the scientific publications, in journals and scientific conferences along with the related information.

Table 7 Scientific Dissemination Activities

Partner	Activity Description	Date and Place of Event/Activity	Target Group Category	Dissemination Instrument	Purpose of Activity	Measurable Impact Details
CERTH	arxiv.prg	2/8/2016 Technical report	Researchers (e.g. Experienced research audience, Novice research audience).	Conference paper and / or talk	Diffuse the scientific and technological achievements	-
CERTH	8th International IEEE Conference on Neural Engineering	5/25/2017 Shangai, China	Researchers (e.g. Experienced research audience, Novice research audience). The International IEEE Conference on Neural Engineering is one of the most well-established conferences in the domain of Neural Engineering	Conference paper and / or talk	Raise awareness, Diffuse the scientific and technological achievements	-
CERTH	2nd Annual Global Brain Health Institute Conference. MAMEM	04/19/2017 Barcelona, Spain	Neurologists, Clinical researchers, psychologists, EEG experts, neuroscientists, physicians, patients	Conference paper and poster presentation	Raise awareness, Diffuse the scientific and technological achievements	Acceptance rate 10%

[8] http://www.mamem.eu/results/publications/

	received stipend and selected for presentation .		with neurodegenerative diseases, caregivers,			
CERTH	30th IEEE International Symposium on Computer-based Medical Systems, Special Track on Multimodal Interfaces for Natural Human Computer Interaction: Theory and Applications, IEEE CBMS 2017	June 22-24, 2017 Thessaloniki - Greece	Researchers (e.g. Experienced research audience, Novice research audience)	Presentation / Demonstration	Foster technology uptake, Diffuse the scientific and technological achievements	-
CERTH	7th Graz Brain-Computer Interface Conference	September 18th – 22nd, 2017, Graz, Austria	Researchers (e.g. Experienced research audience, Novice research audience)	Presentation	Foster technology uptake, Diffuse the scientific and technological achievements	-
CERTH	30th IEEE International Symposium on Computer-based Medical Systems, Special Track on Multimodal Interfaces for Natural Human Computer Interaction: Theory and Applications, IEEE CBMS 2017	June 22-24, 2017 Thessaloniki - Greece	Researchers (e.g. Experienced research audience, Novice research audience)	Presentation	Foster technology uptake, Diffuse the scientific and technological achievements	-

SHEBA	Rehab Science & Technology Update 2016	8/2/2016 Rishon Letzion Israel	Researchers (e.g. Experienced research audience, Novice research audience).	Conference paper and / or talk	Raise awareness, Diffuse the scientific and technological achievements	Approximately 400 attendees
SHEBA	20th European Congress of Physical and Rehabilitation Medicine	4/28/2016 Lisbon Portugal	Researchers interested in rehabilitation of people with disabilities	Conference paper and / or talk	Raise awareness, Diffuse the scientific and technological achievements	More than 500 attendees
AUTH	20th International Conference of Parkinson's Disease and Movement Disorders	6/19/2016 Berlin, Germany	Researchers (e.g. Experienced research audience, Novice research audience). Researchers in the field of Parkinson Disease.	Conference paper and / or talk	Diffuse the scientific and technological achievements	The international congress of Parskinson disease is one of the most well-known venues in the area of PD, attracting more than 5000 neurologists
AUTH	American Academy of Neurology 69th Annual Meeting	4/28/2017 Boston USA	Researchers (e.g. Experienced research audience, Novice research audience). Doctors and neuro-physiologists	Conference paper and / or talk	Raise awareness, Diffuse the scientific and technological achievements	It is considered one of the most important conference it the field of Neurology with the number of attendees reaching on the order of 13000 and an acceptance rate < 50%

AUTH	2nd Congress of the European Academy of Neurology. MAMEM team presented the results of the study performed under WP6 in a conference dedicated to Neurology.	5/28/2016 Copenhagen, Denmark	Researchers (e.g. Experienced research audience, Novice research audience).	Presentation / Demonstration	Diffuse the scientific and technological achievements	Approximately 5500 neurologists
UNI KO-LD	9th Nordic Conference on Human-Computer Interaction	10/26/2016 Gothenburg, Sweden	Researchers (e.g. Experienced research audience, Novice research audience).	Presentation / Demonstration, Booth in exhibition / conference, Event in conference (as attendee)	Foster technology uptake, Diffuse the scientific and technological achievements	200 attendees
UNI KO-LD	IEEE Multimedia 2016	04/15/2016	Researchers (e.g. Experienced research audience, Novice research audience).	Presentation / Demonstration	Foster technology uptake, Diffuse the scientific and technological achievements	Impact Factor 1.361
UNI KO-LD	IUI 2017	3/14/2017 Cyprus	Researchers (e.g. Experienced research audience, Novice research audience).	Presentation / Demonstration	Foster technology uptake	23% Acceptance Rate
UNI KO-LD	30th IEEE International Symposium on Computer-based Medical Systems, Special Track on Multimodal Interfaces for Natural Human Computer	June 22-24, 2017 Thessaloniki - Greece	Researchers (e.g. Experienced research audience, Novice research audience)	Presentation	Foster technology uptake, Diffuse the scientific and technological achievements	-

	Interaction: Theory and Applications, IEEE CBMS 2017					
UNI KO-LD	30th IEEE International Symposium on Computer-based Medical Systems, Special Track on Multimodal Interfaces for Natural Human Computer Interaction: Theory and Applications, IEEE CBMS 2017	June 22-24, 2017 Thessaloniki - Greece	Researchers (e.g. Experienced research audience, Novice research audience)	Presentation	Foster technology uptake, Diffuse the scientific and technological achievements	-
UNI KO-LD	14th International Web for All Conference. W4A'17	4/4/2017, Perth, Australia	Researchers (e.g. Experienced research audience, Novice research audience).	Conference paper	Foster technology uptake, Diffuse the scientific and technological achievements	-
UNI KO-LD	26th International Conference Companion on World Wide Web	4/6/2017, Perth, Australia	Researchers (e.g. Experienced research audience, Novice research audience).	Conference paper	Foster technology uptake, Diffuse the scientific and technological achievements	25% acceptance rate
TU/e	Second International Workshop on Personalization in Persuasive Technology	4/4/2017, Amsterdam, The Netherlands	Researchers (e.g., Experienced research audience, Novice research audience, Industry researchers)	Conference paper		32% acceptance rate

3.7.2 Compare against commitments

In D8.1 we have made a number of commitments with respect the expected number of publications. In the table below we can see the commitments corresponding to the first 24 months of the project, against the achieved publications. We can see that the total number of publications

is well on-track with respect to our commitments and is expected to continue this way, as we enter into the last year of our project. This is due to the fact that the data collected during Phase I of the project will be use as seed for generating a number of additional publications.

CERTH	UNI KO-LD	EB-Neuro	SMI	TU/e	MDA HELLAS	AUTH	SHEBA	Accomplishment/ Commitment
6/3	7/4	-	-	1/3	-	3/4	2/6	19/20

3.7.3 Impact Assessment

In terms of assessing the impact of the undertake activities, the consortium target that has been set in D8.2 relates to the number of scientific publications. We can see from the table below that our achievements in this respect are well on-track, since we have published 18 out of the 39 that have been foreseen until the end of the project. In particular, we expect for the last year of the project to be particularly productive in terms of scientific publications, as was also foreseen in our dissemination plan. Furthermore, in terms of the achieved impact, until now the majority of the scientific publications acknowledged to MAMEM have been published in conference proceedings. However, as our research becomes more mature, we believe that our scientific findings will also qualify for journal publications in prestigious venues.

DISSEMINATION ACTIVITY	INDICATORS	CONSORTIUM TARGET	
SCIENTIFIC DISSEMINATION	**Number of Publications**	**39**	**19**

3.8 Workshops/special sessions organized

The organization of special sessions and workshops has proven one of the most effective instruments for making the project objectives and outcomes known, but most importantly for establishing collaborations with people that could make direct use of MAMEM technologies. Acknowledging this fact, MAMEM partners have committed to organize a number of events during the course of the project. In the following we report about the workshops/special sessions that have been organized by MAMEM, compare against our commitments and assess their impact.

3.8.1 Report of Activities

The following table lists the activities related to the organization of workshops/special sessions.

Partner	Activity Description	Date and Place	Target Group Category	Dissemination Instrument	Purpose	Measurable Impact Details	Exploitation Track
CERTH	10th Panhellenic Conference on Alzheimer's Disease and Related Disorders and 2nd Mediterranean	2/3/2017 Thessaloniki, Greece	Researchers (e.g. Experienced research audience, Novice research audience). Doctors, neuro-	Invited speech	Raise awareness, Reach out to the end-users, Diffuse the scientific and technological achievements	Approximately 100 participants	Organization of workshop/special session/seminar

	Conference on Neurodegenerative Diseases		physiologists and engineers that are active in the field of Alzheimer's Disease and Related Disorders.				
CERTH	30th IEEE International Symposium on Computer-based Medical Systems, Special Track on Multimodal Interfaces for Natural Human Computer Interaction: Theory and Applications, IEEE CBMS 2017	June 22-24, 2017 Thessaloniki - Greece	Researchers (e.g. Experienced research audience, Novice research audience)	Presentation	Foster technology uptake, Diffuse the scientific and technological achievements	-	Organization of workshop/special session/seminar
UNI KO - LD	30th IEEE International Symposium on Computer-based Medical Systems, Special Track on Multimodal Interfaces for Natural Human Computer Interaction: Theory and Applications, IEEE CBMS 2017	June 22-24, 2017 Thessaloniki - Greece	Researchers (e.g. Experienced research audience, Novice research audience)	Presentation	Foster technology uptake, Diffuse the scientific and technological achievements	-	Organization of workshop/special session/seminar
MDA Hellas	2nd Workshop on the latest developments of Neuro-muscular Disorders. GazeTheWeb-Browse has been awarded with third place audience award.	6/11/2016 Thessaloniki, Greece	People with disabilities and the general public (e.g. SCI, NMD, PD, ALS, MS, etc). Patients, doctors, care-givers and other professionals seeking information about the latest developments of the disease.	Invited speech, Presentation / Demonstration	Raise awareness, Reach out to the end-users	Approximately 100 people participate in the event	Organization of workshop/special session/seminar

MDA Hellas	UPPMD Semi annual meeting	11/13/2016, London, UK	People with disabilities and the general public (e.g. SCI, NMD, PD, ALS, MS, etc).	Presentation / Demonstration	Raise awareness, Reach out to the end-users, Diffuse the scientific and technological achievements	25+ attendees from the 15+ major international patient organizations in US and EMEA	Organization of workshop/special session/seminar
AUTH	World Parkinson's Disease Day	4/11/2017, Thessaloniki, Greece	People with disabilities and the general public (e.g. SCI, NMD, PD, ALS, MS, etc).	Face-to-face communication, Leaflet, Invited speech	Reach out to the end-users	Attendees for events (120 attendes)	Organization of workshop/special session/seminar

More specifically, both CERTH and MDA Hellas have contributed in the organization of the "2nd Workshop on the latest developments of Neuro-muscular Disorders". The program of this workshop was made with the active participation of MDA Hellas, while CERTH participated in the event as a sponsor with the MAMEM brand and presented the objectives of the project. In addition, CERTH and UNI KO-LD are co-organizing the special track on "Multimodal Interfaces for Natural Human Computer Interaction: Theory and Applications" in conjunction with the "30th IEEE International Symposium on Computer-based Medical Systems". In addition, CERTH has also contributed in the organization of the "10th Panhellenic Conference on Alzheimer's Disease and Related Disorders and 2nd Mediterranean Conference on Neurodegenerative Diseases". Finally, AUTH has co-organized the workshop on "World Parkinson's Disease Day, in Thessaloniki, Greece". All the above, constitute a significant body of activities in terms of organizing scientific venues.

3.8.2 Compare against commitments per partner per activity

With respect to the commitments made in D8.2 we can see in the following table that although we are a bit behind with respect to the promised number, we are well on track to achieve the consortium target by the end of the project.

CERTH	UNI KO-LD	EB-Neuro	SMI	TU/e	MDA HELLAS	AUTH	SHEBA	Commitment/Accomplishment
2/1	1/1	-	-	-	2/0	1/2	0/3	6/7

3.8.3 Impact Assessment

In terms of the achieved impact, the consortium targets that have been specified in our dissemination plan with respect to this type of activities are: a) the number of organized events (i.e. workshops, special sessions), and b) the number of attendants. As we can see in the following table with 6 out of the 10 promised events we are well on-track on achieving the consortium target. Moreover, with respect to the audience reached through these events we are already over our target since our estimates reach the level of 360 individuals. In the remainder of the project we will undertake the necessary efforts to organize 4 additional events for meeting our target.

DISSEMINATION ACTIVITY	INDICATORS	CONSORTIUM TARGET

WORKSHOPS	**Number of organized workshops**	**10**	**6**
	Attendance (target Groups)	**100**	**360**

3.9 Networking and clustering activities

As already mentioned the instrument of direct communication has been employed by the MAMEM partners in order to present the project goals, advertise the developed tools, but most importantly to establish new collaborations with stakeholders and attract potential clients. Below we summarize the dissemination activities that have taken place using this instrument. More specifically, we can see from the reported activities that the use case partners are trying to get in touch with the governmental bodies in their area (i.e. health regulators, ICT industry, patient organizations) in order to present the project goals, advertise the developed tools, but most importantly, closely collaborate with the decisions makers on investigating how the MAMEM solution can be adopted to facilitate their needs. In addition, this type of activities are also very important for private companies seeking to communicate with potential companies, as well as the research organization that would like to extent their scientific and collaboration network.

3.9.1 Report of Activities

The following tables provide the activities that have been undertaken using the aforementioned dissemination instruments. In reporting on these activities we distinguish between direct communication with stakeholders and communication with potential clients.

Direct communication with stakeholders

Partner	Activity Description	Date and Place	Target Group Category	Dissemination Instrument	Purpose	Measurable Impact Details	Exploitation Track
TU/e	Persuasive Technology 2016. The dissemination activity of the TU/u in this conference pertains to the persuasive strategies for the MAMEM.	4/6/2016 Salzburg, Austria	Researchers (e.g. Experienced research audience, Novice research audience).	Face-to-face communication, Presentation / Demonstration	Raise awareness, Diffuse the scientific and technological achievements (from both academia and industry)	200 attendees	Scientific excellence
EBNeuro	journees internationales	10/22/2015 Paris, France	Care giving centers (Private care giving centers, Non-governmental organizations (NGOs), Public hospitals and	Booth in exhibition / conference	Raise awareness	500 attendees	Scientific excellence

			medical centers).				
UNI KO-LD	The Winter School on Eye Tracking - Experimental Design, Implementation, and Analysis. MAMEM Poster was presented, and the initial prototype demo to Eye tracking - HCI experts, researchers, and students.	1/17/2016 Monte Verita, Switzerland	Researchers (e.g. Experienced research audience, Novice research audience).	Presentation / Demonstration	Diffuse the scientific and technological achievements	60 attendees	Networking
SHEBA	Sheba research day	12/16/2015 Sheba Medical Center, Israel	Researchers (e.g. Experienced research audience, Novice research audience).	Presentation / Demonstration	Raise awareness	Approximately 100-200 people.	Scientific excellence
AUTH	World Parkinson's Disease Day 2017	4/11/2017 Thessaloniki, Greece	People with disabilities, their caretakers and the general public (e.g. SCI, NMD, PD, ALS, MS, etc).	Face-to-face communication, Leaflet, Invited speech, Post in social media	Raise awareness, Reach out to the end-users	200 attendees	Networking and reaching out to the public
CERTH	RRI-ICT 2015 event. The objective was to identify what is considered responsible research. Through the two-day workshop,	7/8/2015 Brussels, Belgium	SSH owners, RRI enabling projects, ICT projects, project officers and the RRI ICT hub	Face-to-face communication, Factsheet, Event in conference (as attendee), Post in social media, Post in	Define responsible research and innovation, Raise awareness, Diffuse the scientific and technological	150 attendees	Networking and Clustering

	networking with similar minded projects was achieved.			web site	achievements		
CERTH	ICT2015. This is the largest event organized by the EC and attracts a huge number of related researchers. It is one of the best opportunities for promoting your project, raising awareness among peers about is objectives, cluster with relevant projects and network with like-minded people.	10/20/2015 Lisbon, Portugal	Researchers from the ICT domain	Leaflet, Factsheet	Raise awareness	7000 attendees	Networking and Clustering
CERTH	European Student Parliament of Science. It is organized in Greece for the second time, aspires to bring together students across Europe and promote knowledge exchange between them and scientists.	3/21/2016 Athens, Greece	People with disabilities and the general public (e.g. SCI, NMD, PD, ALS, MS, etc). The research topics included brain mapping for patients with disabilities	Face-to-face communication, Leaflet, Invited speech, Presentation / Demonstration	Raise awareness, Diffuse the scientific and technological achievements	86 students have participated in the research procedure concerning the human brain committee and over 400 students attended the whole event	Networking and clustering
CERTH	IMI- Patient engagement strategy workshop. The goal of the IMI workshop was to optimise IMI's efforts	4/28/2016 Brussels, Belgium	Representatives of patient organisations, foundations, consumer organisations, regulatory bodies, the European	Face-to-face communication	Raise awareness, Discuss future proposals and forthcoming calls of IMI and	Key stakeholder groups in this area (around 40 participants) and patient representatives from European Patient Organizations,	Networking and clustering

	to be more patient-centric.		Commission, the European Federation of Pharmaceutical Industries and Associations (EFPIA), and non-profit organisations such as Alzheimer's Hellas		other similar projects	Pharmaceutical Industry	
CERTH	ICT Proposers' Day 2016	9/26/2016 Bratislava	Researchers and business-related individuals, interested in joining collaborative research projects	Leaflet	Raise awareness, Diffuse the scientific and technological achievements	Approximately 1500 attendees including researchers from ICT domain.	Networking and clustering
CERTH	Alzheimer Disease International-Greek Alzheimer Units in Founding Opportunities. 33 representatives of Greek Alzheimer Units. Consultants from charitable foundations (TIMA, LATSIS, NIARCHOS).	10/15/2016 Athens, Greece	Care giving centers (Private care giving centers, Non-governmental organizations (NGOs), Public hospitals and medical centers)	Face-to-face communication, Post in social media, Post in web site	Raise awareness, Diffuse the scientific and technological achievements, Active participation in proposals	33 representatives of Greek Alzheimer Units.	Networking and clustering
CERTH	EFPIA- Health Collaboration Summit 2016, a healthier future for Europe.	11/9/2016 Brussels, Belgium	Patient organization representatives, healthcare professionals, industry leaders and research institutions from across Europe	Face-to-face communication, Post in social media	Raise awareness, Reach out to the end-users, Diffuse the scientific and technological achievements, Collaboration that benefits	150 delegates highlighted the value of co-operation between all healthcare stakeholders to improve the development of therapies and assure swift and equitable access across Europe.	Networking and Clustering

					the health systems and patients			
CERTH	Alzheimer Europe Public Affairs meeting with national member associations.	2/28/2017 Luxembourg	Care giving centers (Private care giving centers, Non-governmental organizations (NGOs), Public hospitals and medical and research centers).	Invited speech, Presentation / Demonstration, Post in social media	Raise awareness, Reach out to the end-users, future guidelines	30 chair of Alzheimer Associations from Europe Pharmaceutical companies, neurologists, patient organizations, Alzheimer Associations& Related Disorders, Research Institutions, Policy makers	Networking and Clustering	

Communication with potential clients

Partner	Activity Description	Date and Place	Target Group Category	Dissemination Instrument	Purpose	Measurable Impact Details	Exploitation Track
MDA Hellas	ACTION DUCHENNE INTERNATIONAL CONFERENCE. It was critical for MDA Hellas to present MAMEM to the rest of the stakeholders but also to possible final users.	11/12/2016 London, UK	People with disabilities and the general public (e.g. SCI, NMD, PD, ALS, MS, etc).	Face-to-face communication	Raise awareness, Reach out to the end-users	Action Duchenne is the largest International Conference in Northern Europe more than 500 Attendees and 20 Patient Organizations from 15+ countries	Attract clients
MDA Hellas	MDA CYPRUS , Annual General Assembly	1/22/2017 Cyprus Institute of Neurology and Genetics (CING) , Nicosia Cyprus	Care giving centers (Private care giving centers, Non-governmental organizations (NGOs), Public hospitals and medical	Face-to-face communication, Conference paper and / or talk, Presentation /	Raise awareness, Reach out to the end-users, Diffuse the scientific and technological	120 Patient and Carers	Attract clients

			centers).	Demonstration	achievements		
EBNeuro	Firenze	11/14/2016 Firenze, Italy	Care giving centers (Private care giving centers, Non-governmental organizations (NGOs), Public hospitals and medical centers).	Face-to-face communication, Leaflet	Raise awareness, get in touch with the people who sell medical technologies	15 Health care professionals	Attract clients
EBNeuro	Medica	11/16/2015 Dusseldorf, Germany	Manufacturers (e.g. EEG and/or Eye-tracking equipment, SMEs in assistive technologies, medical equipment).	Face-to-face communication, Booth in exhibition / conference	Raise awareness	Medical fair this year scored 130,000 specialist visitors from around 120 nations	Attract clients
UNI KO-LD	15th International Conference On Duchenne And Becker Muscular Dystrophy	2/18/2017 Rome, Italy	People with disabilities and the general public (e.g. SCI, NMD, PD, ALS, MS, etc).	Face-to-face communication, Presentation / Demonstration, Booth in exhibition / conference	Reach out to the end-users	600	Attract clients

3.9.2 Compare against commitments

By comparing against the commitments that have been made as part of D8.2 we can see that we are very close to the target in what refers to the direct communication with stakeholders, as well as in what refers to our communication with potential clients. More specifically, we have undertaken 13 out of the 14 promised activities dealing with the direct communication of stakeholders. Similarly, there have been 5 dissemination activities targeting potential clients, out of the 6 that were foreseen in the D8.2. In the remainder of the project we plan to keep a similar pace for maximizing MAMEM opportunities on generating value.

Activity	CERTH	UNI KO-LD	EB-Neuro	SMI	TU/e	MDA HELLAS	AUTH	SHEBA	Accomplishment/ Commitment
Direct Commu	8/3	1/4	1/0	-	1/1	0/6	1/0	1/0	13/14

nication with Stakeholders									
Communication with Potential Clients	0/1	1/2	2/0	-	-	2/0	-	0/2	5/5

3.9.3 Impact Assessment

From the activities above it is evident that the dissemination instrument of direct communication with relevant stakeholders and potential clients has been extensively used by the members of the MAMEM consortium. MAMEM partners have managed to get in direct contact with many potential stakeholders and during these communications the opportunity of using the MAMEM technologies for addressing some of their needs were thoroughly discussed. Also, the MAMEM demo was appreciated in most venues, and received relevant feedback for future work. In terms of assessing the achieved impact, the only target that has been set for the consortium is the number of possible collaboration with the industry of SMEs. We can see from the table below that we have set a target of 10 potential clients and we have already managed to reach 5 of them. Given that the business-oriented dissemination activities are expected to become more intense in the final year of the project, we are confident that we will manage to reach the consortium target by the end of the project.

DISSEMINATION ACTIVITY	INDICATORS	CONSORTIUM TARGET	
MONETIZATION	**Possible collaborations with the industry and/or SMEs**	**10**	5

3.10 Trials

The overall objective of the WP6 was to provide on-going transformational interface between the engineering developments and the required clinical implementations, in order to translate the technological method to an assistive platform that will empower social involvement of subjects with disabilities. Thus, during M23 we conducted pilot trials with patients to test and improve the usability of the platform, in particular related to multimedia authoring tasks. The specific objective of the trials was therefore to conduct pilot experiments with the participation of patients (PD, SCI and NMDs) and healthy subjects. Given the complexity of these trials we have considered that a significant part of the allocated efforts can be considered as dissemination activities since they deal with reaching out to the experimental subjects, both patients and able-bodied.

3.10.1Report of Activities

In the following we report on the trial-related dissemination activities.

Organization	Date-Place of Activity	Cohorts- Phase I
Information Technologies Institute ARISTOTLE UNIVERSITY OF THESSALONIKI	15/2/2017- 1/3/2017	6 PD 6 Healthy
Sheba - Academic Medical Center Hospital	13/2/2017- 5/4/2017	6 SCI 6 Healthy
MDA ΕΛΛΑΣ Information Technologies Institute	7/3/2017- 21/3/2017	6 NMD 6 Healthy
TOTAL		18 motor-impaired (PD, NMD, SCI) & 18 healthy 36 participants

3.10.2 Impact Assessment

The clinical partners formulated a consistent protocol across the centres, which required to take into account any inconsistencies among the rules and regulations between the countries (if any exist). In each clinical site, we have defined an experimental protocol specific to the tested patient cohort, which included definitions of participant's inclusion and exclusion criteria. All clinical sites managed to successfully recruit 12 (6+6) patient subjects from both genders, as well as from an age- and gender-matched healthy group. In this respect we are fully aligned with the consortium targets as specified in D8.2 and demonstrated in the table below.

DISSEMINATION ACTIVITY	INDICATORS	CONSORTIUM TARGET	
TRIALS	Number of Clinical Trials	6 (=3x2)	3
	Patients taking part	63 (3x21)	36
	Care givers taking part	15 *(3x5)	15

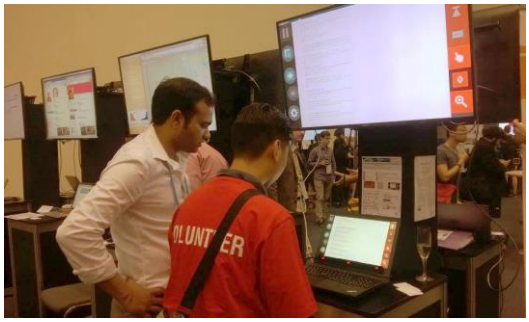
3.11 Highlights

In this section we have decided to present as highlights some of our dissemination activities that we consider as most important. Relevant images and material for all other dissemination activities can be found in Appendix B, as well as under the "News" are of our web-site[9].

3.11.1Award for GazeTheWeb in Web For All (w4a2017) Accessibility Challenge

The GazeTheWeb browser that have been developed by UNI KO-LD in the context of MAMEM, received the Web For All 2017 (w4a2017[10]) "Web Accessibility Challenge" award in Perth, Australia. The 14th International Web for All Conference was focused on the theme of "The Future of Accessible Work". The TPG Web Accessibility Challenge in w4a is an annual worldwide competition to showcase advanced Web and Mobile technologies to technical leaders from academia and industry. The goal of the Challenge is to acknowledge the development of innovative and usable technologies to make Web accessible to all people. The Challenge featured several experimental systems and technologies that were compared and evaluated by a panel of accessibility experts and delegates to identify the most significant advances in accessibility research in the year 2017. GazeTheWeb received a highly positive response for its usability and impact in the field of Web accessibility, and was adjudged as the winner of the 11th TPG Web Accessibility Challenge 2017.

3.11.2 The Chromium based Web extraction framework received 'honorable mention' at worlds most renowned World Wide Web (WWW) conference



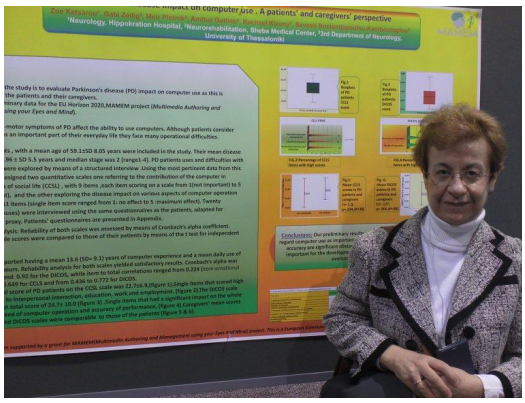
MAMEM platform is centred on interactive Web access for end-users by novel input mechanism. Moreover, enabling Web interaction by non-conventional input sources like eyes (or BCI) has great potential to enhance Web accessibility. UNI KO-LD proposed an unsupervised web extraction and extendable technical framework to include explicit interaction events in web pages, which was presented at the 26th International World Wide Web Conference. More specifically, in the paper we demonstrated the Chromium based inclusive framework to adapt eye gaze events in

[9] http://www.mamem.eu/news/

[10] http://www.w4a.info/

Web interfaces, which includes the Web extraction methodology to identify the input and selectable objects, and a gaze enhanced design to interact with the objects. The novel idea was very much appreciated by the World Wide Web community and our paper 'Chromium based Framework to Include Gaze Interaction in Web Browser' received the honourable mention award competing with several other state of the art researches in international Web community.

3.11.3 MAMEM's study presented in AAN 69th Annual Meeting, the premium conference in Neurology



Dr. Zoe Katsarou and Dr. Sevasti Bostantjopoulou-Kambouroglou had the opportunity to present MAMEM's study on the impact of Parkinson's disease on the computer use in the 69th Annual Meeting of the American Academy of Neurology in Boston, Massachusetts – USA. The annual meetings of the American Academy of Neurology is one of the most prestigious venues for presenting research work in Neurology and attracts scientists, not only from USA but from all over the word (108 countries this year). This has been a great opportunity for MAMEM to present its results at the premium conference on Neurology and inform the research community about its achievements. A lot of participants, some of whom were distinguished neurologists were attracted by the poster's idea and showed great interest about the MAMEM project. Most of them wanted to know more details about the MAMEM platform and were eager to see the results of the clinical trials.

3.11.4 MAMEM featured at IEEE Computing Now – Preparing Tomorrow's Software Engineers

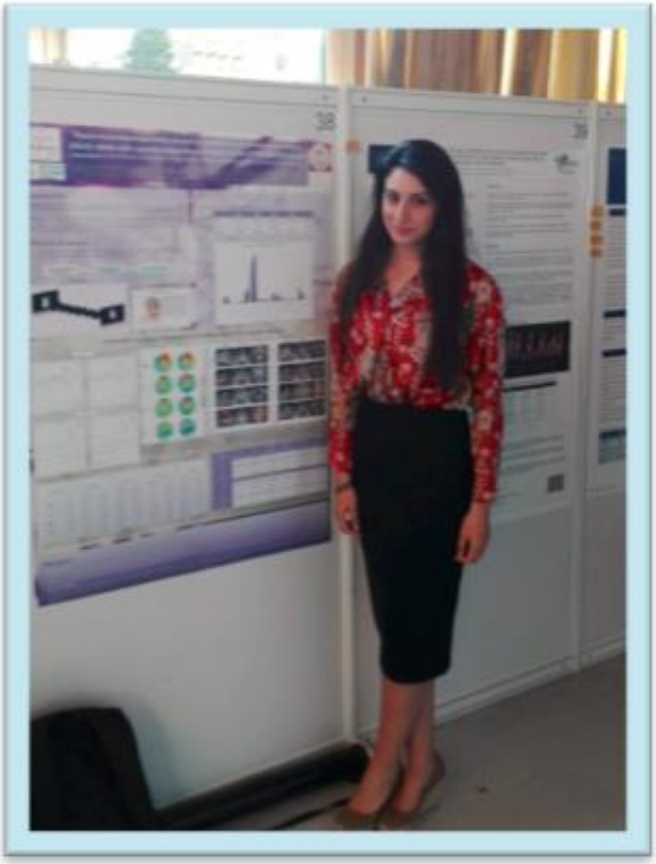
The February issue of the Computing Now Newsletter that is published by the IEEE Computer Society[11] decided to feature MAMEM by linking with the paper on **Eye-Controlled Interfaces for Multimedia Interaction**, published by our colleagues from the UNI KO –LD. The paper was published in IEEE MultiMedia (Volume: 23, Issue: 4, Oct.-Dec. 2016), which proposed the development of gaze-based control paradigm. We have presented MAMEM initial results by outlining the challenges and guidelines for the

[11] https://www.computer.org/multimedia-magazine/2017/01/20/eye-controlled-interfaces-for-multimedia-interaction/

development of eye-controlled interfaces. The approach investigates how eye-based interaction techniques can be made precise and fast enough to let disabled people easily interact with multimedia information.

3.11.5 MAMEM receives one out of ten offered stipends among 100 applications in the 2nd Annual Global Brain Health Institute Conference

GBHI was launched in 2015, founded with generous support from The Atlantic Philanthropies. GBHI works to reduce the scale and impact of dementia and related neurodegenerative disorders around the world by training and supporting a new generation of leaders to translate research evidence into effective policy and practice. GBHI annual conferences are designed to bring together experts in the field of aging, dementia and neurodegeneration from around the world. This 2nd Annual GBHI Conference in Barcelona focused on advancing awareness of dementia in Spain and the larger Mediterranean region, and affords a unique opportunity for potential GBHI trainees to meet with current GBHI Faculty, Fellows and Scholars. The four-day program included invited speeches, poster presentations, panel discussions, lectures, and social gatherings. Among 100 applications only 10 received stipend for the Conference and MAMEM's team was among them.



3.12 Summary of Reported Activities

3.12.1Compare against total commitments

In **Table 8** we provide the summary of the undertaken dissemination activities against the commitments made in D8.2. More specifically, our intention with this table is the identity the type of activities that fall short with respect to our initial plans and impose corrective actions if necessary. The commitments vs. achievements are presented for each semester until M24. Moreover, the column title "Total" accumulates the number of commitments up to M24 and the column title "Comp." accumulate the achievements up to M24. Finally, the column title "Done" presents the completion rate for each type of dissemination activity.

Table 8 MAMEM Dissemination Plan

	MAMEM												
	Year 1				Year 2				Year 3				
	Semester I		Semester II		Semester III		Semester IV		Semester V	Semester VI	Total	Comp.	Done (%)
Project website	1	1	0	0	0	0	1	1	0	0	2	2	100,00%
Communication Kit	1	1	0	0	0	0	1	1	0	0	2	2	100,00%
Newsletters	0	0	5	1	4	0	5	0	4	4	14	1	7,14%
Media communication, press releases	0	0	3	0	1	1	3	0	1	1	7	1	14,29%
Audio-visual material (video)	0	0	0	4	2	0	0	4	1	1	2	8	400,00%
Demonstration/participation in exhibitions / events	0	0	5	3	3	2	12	6	3	3	20	11	55,00%
Social media posts	15	55	45	78	56	70	89	84	82	82	205	287	140,00%
News posts	11	15	25	24	40	20	47	22	46	46	123	81	65,85%

Publications in conferences/journals	0	0	5	5	4	2	11	12	7	7	**20**	**19**	**95,00%**
Workshops/special sessions	0	0	3	1	0	2	4	3	1	1	**7**	**6**	**85,71%**
Networking and clustering activities	2	2	4	3	3	3	5	5	3	3	**14**	**13**	**92,86%**
Communication with potential clients	0	0	1	1	0	1	4	3	1	1	**5**	**5**	**100,00%**
	May-Oct '16		Nov-March '17		Apr-Sept '17		Oct-March '17		Apr-Sept '17	Oct-Mar '18			

In **Table 8** color code has been used to indicate the different status, differentiating between green for the cases that are well on-track, orange for the cases that are lucking behind but still within limits so as to reach the final goal, and cases marked with red where corrective actions are needs. The two types of instrument that have been colored as red are the "Newsletters" and the "Media communication and press releases". With respect to the Newsletter it is evident that the use of micro blog-posts has pretty much covered the need to disseminate the project results and achievements. Thus, none of the partners was motivated enough to generate "Newsletters". Therefore, we have decided to adopt the corrective action of completely dropping this dissemination instrument with the intention to redirect out dissemination efforts towards more meaningful dissemination activities. Although a bit better, the situation is still very negative with respect to media communication and press releases. However, despite our negative performance so far, we have decided not to drop this dissemination instrument. Our expectation is that with the release of MAMEM Concept Video and the dissemination of our Phase I trial results, we will be given more opportunities to talk in public media and make press releases. Of course, in our revised dissemination plan, the consortium commitments with respect to this dissemination instruments will be corrected so as to form a more realistic goal.

Moreover, apart from the cases that demand for corrective actions there are also the cases that are marked in orange. The worst case can be considered to relate with the "Demonstration/participation in exhibitions / events" that is currently at 55% of the initially identified goal. Although this completion rate can be considered rather off track, this is primarily due to the fact that a high number for this kind of events were foreseen in the 4 Semester of the project. However, small delays in the completion of the field trials may have caused some of the partners not to attend the foreseen events. During the last year of the project there are only 6 additional events foreseen under this dissemination instrument and we believe that we will name to be easier to compensate for the lost space.

The other case that has been coloured as orange is the number of generated news posts. As indicated in **Table 9** we are now at a completion rate of 65% compared to our initial commitments. Moreover, our commitments for this dissemination instrument continue to be rather high for the last year of the project. However, as in the previous cases we don't believe that we would need a radical corrective action for this case. We will try to intensify our efforts during the last year of the project expecting also that the technologies become more mature, more news items will emerge.

3.12.2 Compare against impact indicators

Apart from comparing against our commitments in **Table 9** we also compare against the impact indicators that have been specified in D8.2 and should be achieved by the end of the project. Again we use colour code to indicate the strong and weak points of our methodology, as well as the ones that demand for corrective actions. In the last category we can see the number of newsletter, the number of media communications and press releases, as well as the number of followers in our twitter account. The first two has been discussed in the previous section, while in the case of twitter we have presented our strategy on how to improve our twitter performance in Section 3.3.3. In Section 3.3.3 we have also discussed how to improve the other orange cases of social media such as the low number of LinkedIn group members, the low number of tweets. The next group of indicators that appear as orange cases has to do with the traffic of our site. Despite the fact that the goal has been set to 800 unique visits per month and the average of M1-M24 is on 630, we are rather optimistic that this target will be achieved until the project completion since we have been experiencing more than 800 visits per month, throughout 2017. We expect that we will continue to achieve this amount of visits until the project completion so as to reach our target. This will be further reinforced through our commitment to intensify our efforts on generating news posts. Most of the traffic directed in our web-site is generated by the posts shared under the "News" section and the simultaneous sharing in social media. Thus, we expect for both these targets to be accomplished by the end of the project. Finally, the last cases marked as orange are the number of events with project's presence and the communication with potential clients. As already explained in Section 3.6.3 and Section 3.9.3, we expect for both these indicators to show considerable improvements in the remainder of MAMEM since the bias of our dissemination activities will shift from research-oriented to business-oriented.

Table 9: Comparing against impact indicators

DISSEMINATION ACTIVITY	OVERALL DISSEMINATION OBJECTIVE	INDICATORS	CONSORTIUM TARGET		SOURCE / METHODOLOGY
WEB	**Dissemination channel to**	**Views (per month)**	**800**	**630**	**wordpress analytics**

	inform about the progress of the project, activities going on and related achievements	Downloads (publications, deliverables, open source modules, datasets, etc)	1000	1524	wordpress and github analytics
NEWS & NEWSLETTERS	Disseminate to our target groups the project's progress, achievements and activities	Number of Newsletter publications	20 (including partner-specific newsletters)	1	Project reporting
		News Posts	200	81	wordpress analytics
SOCIAL NETWORKS	Reach out the general audience and stimulate communication in the fields related to MAMEM	Twitter (representative followers)	200	52	Socila account analytics
		Twitter dialogue (tweets)	300	112	Social account analytics
		Facebook (likes)	200	167	Social account analytics
		Facebook (people reached)	20000	18103	Social account analytics
		LinkedIn (group members)	100	46	Social account analytics
		Total Posts	350	287	Social account analytics
TRIALS	Test and evaluate MAMEM's prototypes to end-users	Number of Clinical Trials	6 (=3x2)	3	Project reporting
		Patients taking part	63 (3x21)	36	Project reporting
		Care givers taking part	15 *(3x5)	15	Project reporting
CONF & EVENTS	Disseminate to our target groups in related events and identify commercial interest in	Number of events with project's presence	20	11	Project reporting
		Attendance (target groups)	10.000	20.760	Participant's list

	our results				
WORKSHOPS	**Disseminate to our target groups and get feedback on the scientific and commercial value of our results**	**Number of organized workshops**	**10**	**6**	**Project reporting**
		Attendance (target Groups)	**100**	**360**	**Participant's list**
SCIENTIFIC DISSEMINATION	**Diffuse scientific excellence and detect scientific interest in our results**	**Number of Publications**	**39**	**19**	**Project reporting**
		Possible collaborations with the industry and/or SMEs	**10**	**5**	**Project reporting**
PRESS & MEDIA	**General dissemination for reaching a wider audience and communicating the project's vision and objectives**	**Number of media publications (press releases & media communication)**	**10**	**1**	**Project reporting**
		Audience reached	**80.000**	**-**	**Estimated projections based on the media popularity**

4 Corrections in Dissemination Strategy & Updated Dissemination Plan

The aforementioned analysis has resulted in a number of very useful conclusions that can be used to drive the dissemination efforts in the remainder of our project. More specifically, we have identified the following:

1. Until M24 our dissemination efforts have been primarily biased towards the target group of researchers placing more emphasis on the scientific outcomes of our project.
2. In the remainder of MAMEM, it is important to balance or even reverse this bias towards business-oriented activities that will allow us to create the basis for the exploitation of our results.
3. GazeTheWeb has surfaced as a very tangible outcome of the project and has received in increased attention by potential clients and end-users. It has been a common decision among the consortium to re-direct some of the dissemination investments towards promoting GazeTheWeb in relevant venues and organizations.
4. In meeting the aforementioned objective it was deemed necessary for the project to identify opportunities and end-user organizations that would streamline the introduction of GazeTheWeb in relevant communalities.
5. The use of social media networks and micro blog-posts has been rather effective for disseminating the day-to-day news of our project. This is in contrary to more traditional ways of dissemination like newsletters and press releases that weren't favoured by MAMEM partners.
6. Therefore, we have decided to completely drop the idea of newsletters and decrease the effort anticipated for press releases, in favour of being more active and engaging in social media.
7. After 24 months we also have a very good understanding of which channels seem to be more influential and which not. Based on this experience we have decided to completely drop the support for Google+.

4.1 Identification of Opportunities

Due to the multitude of end-users, stakeholders and beneficiaries that relate to motor impairments and BCI from different perspectives (physicians, patients, researchers, assistive technologies companies, healthcare organizations, etc.), further target groups have been identified compared to D8.2. More specifically, some of the additional target groups that have been identified are:

- Political institutions, i.e., European Federation of Pharmaceutical Industry and Association.
- Members of EU commission (i.e., IMI) in order to increase the recognition of the solutions developed in MAMEM.
- Nongovernmental organizations (NGOs), i.e., health care maintenance organisations (i.e. Association of Parkinsonians).
- National and international scientists from related fields.
- Participants in the MAMEM trials, their friends and relatives.
- Researchers and scientists involved in MAMEM (e.g., through internal meetings, workshops, etc.).
- Schools and other educational institutions (e.g., by giving groups the possibility to visit and learn about MAMEM)

4.2 Liaison with related initiatives and organizations

In the journey 'from the lab to the market', also considering the project's sustainability after the grant period, a number of phases (e.g., provisioning and commercialization of MAMEM services) may call for a new breed of partnerships forged with industrial and health stakeholders players that are not part of the MAMEM Consortium. The rationale underpinning such alliances could be manifold, such as (inter alia) extending own capabilities by relying on other firms to furnish particular resources or perform certain activities, mitigating risks and uncertainty, avoiding excessive capital investment and reducing operating costs. Technological or commercial partnerships in this vein will create novel business opportunities in MAMEM, enlarging sales volume and ushering-in new market positioning.

During the reporting period, the MAMEM project has established liaison with a series of initiatives and organizations related to the project's overall scope, vision and objectives, among others, toward further increasing awareness for the project in the respective communities. The key elements of these initial MAMEM efforts are summarized in the present section, while target related initiatives and associations with which the project will further seek collaborations in the next period are described (Table 10).

Table 10: Liaison with Organizations and MAMEM

Initiatives/Organizations	
efpia European Federation of Pharmaceutical Industries and Associations	**European Federation of Pharmaceutical Industries and Associations (EFPIA)**
imi Innovative Medicines Initiative	**Innovative Medicines Initiatives (IMI)**
GLOBAL BRAIN HEALTH INSTITUTE UCSF Trinity College Dublin	**Global Brain Health Institute (GBHI)**
Alzheimer Europe	**Alzheimer Europe (AE)**
Alzheimer's Disease International The global voice on dementia	**Alzheimer Disease International (ADI)**
EPDA European Parkinson's Disease Association	**European Parkinson Disease Association (EPDA)**
United Parent Projects Muscular Dystrophy	**United Parent Projects Muscular Dystrophy (UPPMD)**

eamda EUROPEAN ALLIANCE OF NEUROMUSCULAR DISORDERS ASSOCIATIONS	**European Alliance of Neuromuscular Disorders Association (EAMDA)**
TREAT-NMD Neuromuscular Network	**TREAT NMD Neuromuscular Network**
ASIA AMERICAN SPINAL INJURY ASSOCIATION	**American Spinal Injury Association (ASIA)**
ISCoS The International Spinal Cord Society	**International Spinal Cord Society (ISCoS)**
sia spinal injuries association	**Spinal Injuries Association (SIA)**
United Spinal Association Spinal Cord Resource Center	**United Spinal's Spinal Cord Injury Resource Center**
ΣΥΛΛΟΓΟΣ ΠΑΡΚΙΝΣΟΝΙΚΩΝ ΑΣΘΕΝΩΝ & ΦΙΛΩΝ ΒΟΡΕΙΟΥ ΕΛΛΑΔΟΣ	**Association of Parkinsonians Patients and Friends of Northern Greece**
Alzheimer Hellas	**Greek Association of Alzheimer's Disease and Related Disorders (GAADRD)- Alzheimer Hellas**

4.2.1 European Federation of Pharmaceutical Industries and Associations (EFPIA)

The aim of the EFPIA, which has no profit-making purpose, is to promote pharmaceutical discovery and development in Europe and to bring to the market medicinal products in order to improve human health worldwide. EFPIA supports a vision of outcomes-driven, sustainable healthcare systems in Europe. They seek for systems that provide patients with equal and early access to the best and safest medicines; that support innovation while balancing realistically benefit and risk; that empowers citizens to make informed decisions about their health and ensure the highest security of the medicines supply chain. Such a vision will also assist policymakers in sustaining Europe's economic growth and competitiveness, by balancing healthcare budgets and helping to provide for a healthy and productive workforce. It also offers the most effective approach to deliver the innovative medicines needed to tackle current and potential health threats.

In EFPIA event "Health Collaboration Summit 2016, a healthier future for Europe" CERTH was present. The EFPIA Health Collaboration Summit 2016 focused on tools that might be introduced

to overcome the significant challenges faced by European health systems, such as unlocking the potential of value-based healthcare, focusing on the outcomes that people/patients really care about. Among attendees, there were representatives from pharmaceutical industrial area, patient and research organizations, policy makers and universities. We took the opportunity to describe them about MAMEM goals and results. Our colleagues were interested in our study and they were excited with MAMEM's concept, while they underlined the "patient-oriented" ethos behind our research and our focus to share best practice to address the needs and promote social integration of motor-impaired patients.

4.2.2 Innovative Medicines Initiatives (IMI)

The Innovative Medicines Initiative (IMI) is working to improve health by speeding up the development of, and patient access to, innovative medicines, particularly in areas where there is an unmet medical or social need. It does this by facilitating collaboration between the key players involved in healthcare research, including universities, the pharmaceutical and other industries, small and medium-sized enterprises (SMEs), patient organizations, and medicines regulators. IMI is a partnership between the European Union (represented by the European Commission) and the European pharmaceutical industry (represented by EFPIA).

New strategies were also discussed between MAMEM representatives and IMI regulators for optimization and coordination of patient engagement practice in different projects and realization of the patient centric aspiration of the IMI Strategic Research Agenda. Already now at IMI there are many examples of projects involving patients, where their unique expertise is incorporated into clinical study design, improving patient recruitment, defining patient relevant outcomes, benefit risk discussions, dissemination, and many more. Therefore, MAMEM comes to add the abovementioned points by actively promoting a patient centric-approach, encouraging all the patients with motor disabilities to become more social integrated and have leading role in the project. The important role of MAMEM as a "patient-engagement" project was recognized and highlighted by all scientific participants of the workshop.

4.2.3 Global Brain Health Institute (GBHI)

The Global Brain Health Institute (GBHI) works to reduce the scale and impact of dementia around the world by training and supporting a new generation of leaders to translate research evidence into effective policy and practice. Some of its major goals are: i) build an internationally recognized, multi-disciplinary training program for global leaders in brain health, ii) Attract diverse, high-quality candidates to the GBHI training programs, iii) Develop a strong, robust network of mentors, colleagues, and funding opportunities to support fellows and scholars in their career ambitions and post training activities, iv) Establish partnerships with a diverse set of prestigious organizations and international institutions, v) Support innovative and cross-disciplinary research and activities for trainees in a highly collaborative environment focused on developing and implementing scalable interventions.

CERTH's study has been selected among 100 applications to receive stipend so as to be presented during the 2nd annual GBHI Conference in Barcelona. This opportunity gave a chance to describe MAMEM vision to health regulators, neuroscientists and clinical researchers from University of California as well as Trinity College. Also, further discussions made about how to explore different approaches for achieving changes in government attitudes towards brain research and many examples of successful research projects in the field of dementia, brain diseases, genetics and biomarkers were also discussed.

4.2.4 Alzheimer Disease International (ADI), Alzheimer Europe (AE) and Greek Association of Alzheimer's Disease and Related Disorders- Alzheimer Hellas (GAADRD)

ADI believes that the key to winning the fight against dementia lies in a unique combination of Global Solutions and local knowledge. As such, it works locally, by empowering Alzheimer associations and research institutions worldwide to promote and offer care and support for people with dementia and as well as other neurodegenerative conditions, while working globally to focus attention on dementia.

In addition, ADI runs the Alzheimer University, a series of practical workshops aimed at helping the staff and volunteers of Alzheimer associations build and strengthen their organizations. In the latest meeting in Athens on October 2016, CERTH representative was present taking the opportunity to briefly describe MAMEM project. The important role of MAMEM as an innovative project was recognized and highlighted by all scientific participants of the workshop, while their response revealed both the quality and quantity of the research coming out of MAMEM project. From the second year of the project, MAMEM has established a liaison with AE, a key non-governmental organisation aimed at raising awareness of all forms of dementia by creating a common European platform through co-ordination and co-operation between Alzheimer organisations throughout Europe.

Additionally, a liaison has been driven by the strong bond between Alzheimer Europe and CERTH, since both have been involved in various projects relevant to neurodegeneration and brain imaging methods as well as ICT and assistive technology solution for people with cognitive (AD), as well as motor impairments (PD) related to neurodegenerative pathologies. In this scope, the MAMEM project was presented in the Annual meeting of Alzheimer Europe that was held in Luxemburg on February 2017, where we had the opportunity to communicate the vision and objectives of the project among a key audience of experts in the AD and PD domain as well.

Among the members of ADI and AE is the GAADRD-Alzheimer Hellas, a non-profit organization which was formed in 1995. The action of Alzheimer Hellas has been recognized internationally and is used as an example of good practice by the ADI. Regarding the scientific and research field, AH organises Pan-Hellenic Interdisciplinary Conferences. CERTH, which is coordinating MAMEM project has been closely collaborated with Greek Alzheimer's Association and Related disorders (GAADRD) which paves the way for future collaboration in the field of computational neuroscience and more specifically neurodegenerative disorders and BCI research.

As already reported, MAMEM was demonstrated at the 10th Panhellenic Conference on Alzheimer's Disease and Related Disorders and 2nd Mediterranean Conference on Neurodegenerative Diseases which took place in Thessaloniki, on 2-5 February 2017 at the Grand Hotel Palace. Nearly 500 neuroscientists, health professionals and clinical researchers of the world gathered to learn about the latest progress in Alzheimer's Disease and other neurological related disorders such as Parkinson's disease, Multiple Sclerosis etc. Patient Organizations, Regulators, Companies and Clinicians were present to update the community for the latest research and technologies. MAMEM's prototype GazeTheWeb, which allows hands free Web navigation, was demonstrated at a specific session "New Technologies for Neurological disorders". Attendees as well as other professionals found GazeTheWeb a useful and novel approach for successful interaction with Web.

4.2.5 European Parkinson Disease Association (EPDA) and Association of Parkinsonians Patients and Friends of Northern Greece

The European Parkinson's Disease Association (EPDA) is the only European Parkinson's umbrella organisation. As the leading voice for Parkinson's in Europe, they provide information and resources to all Parkinson's stakeholders, raise awareness of the disease's complexities and impact, and advocate for concrete policy change that benefits the Parkinson's community. Strategic goals of EPDA are: i) to advocate for people with Parkinson's and their families to get the right information at the right time throughout their Parkinson's journey, ii) to strive for healthcare systems where people with Parkinson's receive early and appropriate treatment and individualised care, iii) to raise awareness of the complexities of Parkinson's and the impact it has on people's quality of life, iv) to support the global Parkinson's community in the search for a cure.

Associated with EPDA, is the Association of Parkinsonians Patients and Friends of Northern Greece which has been founded with the purpose to improve the quality of life of those impacted by Parkinson's disease, their care partners and families, as well as to foster a sense of community to ensure that no one battles this disease alone. Dr Zoe Katsarou and Dr Sevasti Bostantjopoulou are the scientific advisors of the Northern Greece Parkinson's Disease Association which is a member of EPDA. The Association offers exercise, communication and education programs to strengthen the physical and emotional health of people impacted by Parkinson's. In addition to that, MAMEM and the developed methodologies were presented in an event, organized by the Association, aiming to spread awareness about Parkinson Disease during the World Parkinson's Disease Day. Besides technical presentations, patients and their caretakers also provided information about their experience with the disease. During the event patients approached our associates inquiring about the possibility to try using the MAMEM Platform as they found that it could be very useful and could facilitate them with their everyday use of computer.

4.2.6 European Alliance of Neuromuscular Disorders Association (EAMDA), United Parent Projects Muscular Dystrophy (UPPMD) and TREAT NMD Neuromuscular Network

The mission of EAMDA is to represent, protect and enforce the rights of people with neuromuscular disorders. EAMDA also seeks to raise awareness of neuromuscular disorders among the general public throughout its network of associations across Europe. EAMDA aims to give support, assistance and advice to people with neuromuscular disorders and their families, and to facilitate the exchange of information in the areas of healthcare, social services, social inclusion, social skills, education, training, employment, sports and recreation, culture, and full participation in society. From the beginning of the project a strong bond has been created with EAMDA and MDA Hellas so as to distribute scientific excellence, which occurs from MAMEM project. MDA Hellas is a long standing member of EAMDA and plans to explore this network for the distribution of the results of the MAMEM. UPPMD is the Global Umbrella of patient organizations for patients with Duchenne MD. The DMD community is possibly the strongest and most active community in Rare Diseases and MDA Hellas is a key partner in UPPMD and is represented in the Board of Directors. UPPMD is following the MAMEM project closely and informs patient organizations around the world over its results, since a positive outcome may be extremely useful to older patients that have lost their hand mobility but are still active members of the community. On the other hand, TREAT-NMD is a vibrant network for the neuromuscular field that provides an infrastructure to ensure that the most promising new therapies reach patients as quickly as possible. Since its launch in January 2007 the network's focus has been on the development of tools that industry, clinicians and scientists need to bring novel therapeutic approaches through

preclinical development and into the clinic, and on establishing best-practice care for neuromuscular patients worldwide. This network connects the various patient registries and links the clinical experts and sites for Neuromuscular Disorders. MDA Hellas is a registered member and we are in discussions with the network to include the updates of MAMEM in their Newsletter that is widely distributed

4.2.7 American Spinal Injury Association (ASIA), International Spinal Cord Society (ISCoS), Spinal Injuries Association (SIA) and United Spinal's Spinal Cord Injury Resource Center

ASIA's vision is to be the premier North American organization in the field of Spinal Cord Injury care, education, and research. Core values of ASIA are the: i) Commitment to the wellbeing of people with spinal cord injury, ii) Discovery and knowledge translation, iii) Interdisciplinary collaboration, iv) Engagement of the next generation. Its mission is: a) to promote and establish standards of excellence for all aspects of health care of individuals with spinal cord injury from onset throughout life, b) to educate members, other healthcare professionals, patients and their families as well as the public on all aspects of spinal cord injury and its consequences in order to prevent injury, improve care, increase availability of services and maximize the injured individual's potential for full participation in all areas of community life, c) to foster research which aims at preventing spinal cord injury, improving care, reducing consequent disability, and finding a cure for both acute and chronic SCI, d) to facilitate communication among members and other physicians, allied health care professionals, researchers and consumers. Moreover, the International Spinal Cord Society (ISCoS, formerly IMSoP) promotes the highest standard of care in the practice of spinal cord injury for men, women and children throughout the world. Through its medical and multi disciplinary team of Professionals ISCoS endeavours to foster education, research and clinical excellence. Furthermore, United Spinal Association is dedicated to enhancing the quality of life of all people living with spinal cord injuries and disorders (SCI/D), including veterans, and providing support and information to loved ones, care providers and professionals. Their belief that no person should be excluded from opportunity on the basis of their disability has drive them to provide people living with SCI/D programs and services that maximize their independence and enable them to remain active in their communities. Few of their main goals are to offer in people with SCI: i) Access to Quality Affordable Healthcare, ii) Employment Opportunities, Self Sufficiency and Independent Living, iii) Consumer Directed Quality Health Care and Community Integration, iv) Preservation of Social Security Benefits, v) Protecting the Rights of People with Disabilities

The Neurological Rehabilitation Unit in the Rehabilitation Hospital and the Center of Advanced Technologies in Rehabilitation of the Sheba Medical Center continuously monitor the conferences and publications of the American Spinal Injury Association (ASIA), the International Spinal Cord Society (ISCoS), the Spinal Injuries Association (SIA) and the United Spinal's Spinal Cord Injury Resource Center. In additions, Sheba intends to publish the results of the questionnaire study and/or the results of the phase II study in one of the journals that are associated with the aforementioned associations and societies (such as Spinal Cord which one of its publishers are the International Spinal Cord Society) or in one of their conferences.

4.3 Demonstrations in business-related venues

To ensure that MAMEM visual identity will become recognised and to give consistency to the Project brand image, it is important to continuously engage with a range of stakeholders from various domains and geographies.

Table 11: Business-related venues that we intend to participate

Business-related Event	Audience
CMEF Spring edition Shanghai 12-18 May	Potential customers
Neuroconvention London 7-8 June	Potential customers
Medica – 13-16 November	Potential customers
Arabhealth 29 Jan 1st February	Potential customers
CEBIT 2018 Festival of Digital Innovations: A worldwide exhibition of Information technology business	All European IT experts, General public
Die NACHT DER TECHNIK: A popular regional event in Rhineland-Palatinate	People from all age group interested in new technologies

As already stated in Section 3.6, until M24, MAMEM partners have managed to get in direct contact with many health regulators and ICT professionals and companies. As indicated in the table above, it is within the intention of some partners (i.e., EBNeuro and UNI KO-LD) to continue their intensive efforts for making new (or follow-up) communications with relevant stakeholders, primarily health centers and organizations but also private companies. Our goal, by the end of the project, is to develop strong bonds of trust with a high number of stakeholders that will set the basis for future collaboration and usage of the MAMEM toolkit. By aiming at events with relevant target audience and making sure to communicate the project achievements in an attractive way, we expect the activities classified under this instrument to create the necessary awareness and provide great support for the exploitation of the developed technologies, even after the end of the project.

4.4 Scientific outreach and eco-system building

Dissemination of scientific outcomes through social media and content-sharing platforms is clearly to be considered a pillar in the approach to get in contact and engage with target groups and general audience. As we consider important for the knowledge transfer and visibility of MAMEM Project findings – not only with scientific targets, but also among end-users, industrial and governmental ones – the publication in scientific journals, conferences proceedings, book chapters as well as the participation at workshops or community-building events, all Partners will continue to recommend appropriate titles or conferences throughout the Project lifecycle.

As a research project with strong participation from academics and researchers MAMEM places particular emphasis on the academic dissemination of its results, in terms of publications in top conferences and journals. To this end, we have already identified major ICT and health related conferences and journals that are pertinent to the research topics addressed by the project. To this end, **Table 12** constitutes a pool of scientific venues that will be considered by MAMEM

partners. A more detailed list for the intended scientific publication submissions by the MAMEM consortium during the last year of the project can be found in **Appendix C**.

Table 12: Pool of scientific venues for MAMEM publications

Conferences and Workshops	Journals
ACM Multimedia, IEEE Neural Engineering EMBS conference, GOGAIN – European Conference of Eye Movements, w4all, International Conference on Multimedia and Expo, ACM CHI Conference on Human Factors in Computing Systems, ACM Symposium on eye trackgin research & applications – ETRA, Conference proceedings of Persuasive Strategies, Archives of Physical Medicine and Rehabilitation	Journal of Frontiers in Human Neuroscience, Journal on Neural Engineering, Transactions on Neural Systems and Rehabilitation Engineering, Journal of Neurobiology of Aging, ACM Transactions on Accessible Computing, International Journal of Human-Computer Interaction, International Journal of Human-Computer Studies, Journal of NeuroEngineering and Rehabilitation, Journal of Motor Behavior, European Journal of Neurology, Journal of Parkinson's Disease, Parkinsonism and Related Disorders

4.5 Updated individual dissemination plans

Following the conclusions that have be drawn through the activity reporting and impact assessment performed in this document, all MAMEM partners were asked to update their dissemination plans for the last year of the project. In the following, we provide the updated plans making evident any change compared to our original plan. The new commitments appear in brackets marked in red when decreasing from the original commitment and green when increasing. Short explanations are also provided to justify the changes.

4.5.1 CERTH

	Centre for Research and Technology Hellas (CERTH)	
	Year 3	
	Semester V	Semester VI
Dissemination plan (deliverables)		
Project website		
Communication Kit		
Newsletters	1 (0)	1 (0)
Media communication, press releases		1 (2)
Audio-visual material (video)		1
Demonstration/participation in exhibitions/events		1 (2)
Social media posts	40	60
News posts	30 (20)	35 (25)
Publications in conferences/journals	0 (2)	3(4)
Workshops/special sessions		1
Networking and clustering activities		2
Communication with potential clients	1	1

CERTH has decided to completely drop the generation of newsletters since they have been deemed ineffective compared to blog-posts. On the contrary despite the very low performance during the first 24 months, the number of media communication and press released is increased,

showing our commitment in trying to push forward this dissemination instrument. A small increase is has also taken place with respect to the demonstration/participation in exhibition/events, reflecting our intention to have more demonstrations of our prototypes. The number of new posts has bee reduced so as to form a more realistic goal, while there has been an increase in the number of publications, reflecting our optimism about the rigor of our scientific findings.

4.5.2 UNI KO-LD

	University of Koblenz - Landau	
	Year 3	
	Semester V	Semester VI
Dissemination plan (deliverables)		
Project website		
Communication Kit		
Newsletters		
Media communication, press releases		
Audio-visual material (video)		
Demonstration/participation in exhibitions/events		2
Social media posts	2	3
News posts	2	3
Publications in conferences/journals	2	2
Workshops/special sessions		1
Networking and clustering activities		1 (2)
Communication with potential clients		1 (2)

UNI KO-LD has been very active in demonstrating and publishing the project results, in the coming year we want to further increase our activity on networking and meeting potential clients in order to exploit our expertise on eye-tracking domain and to explore the possibilities of commercialization.

4.5.3 EB Neuro SpA

	EB Neuro SpA	
	Year 3	
	Semester V	Semester VI
Dissemination plan (deliverables)		
Project website		
Communication Kit		
Newsletters	1 (0)	1 (0)
Media communication, press releases		
Audio-visual material (video)		
Demonstration/participation in exhibitions/events	0(2)	3(2)
Social media posts		6

News posts		
Publications in conferences/journals		
Workshops/special sessions	0 (1)	
Networking and clusering activities		
Communication with potential clients	0 (2)	

EB Neuro decided to push the activities in communication with potential clients, due to the final stage of the project and the availability of assets.

4.5.4 SMI

	SensoMotoric Instruments	
	Year 3	
	Semester V	Semester VI
Dissemination plan (deliverables)		
Project website		
Communication Kit		
Newsletters		1 (0)
Media communication, press releases		1
Audio-visual material (video)		
Demonstration/participation in exhibitions/events		
Social media posts	10	10
News posts	10	10
Publications in conferences/journals		
Workshops/special sessions		
Networking activities	1	1
Communication with potential clients		

SMI has decided to keep it's dissemination plan unaltered consisting mainly of news post and blog-posts, as well as some networking activities.

4.5.5 TU/e

	Eindhoven University of Technology (TU/u)	
	Year 3	
	Semester V	Semester VI
Dissemination plan (deliverables)		
Project website		
Communication Kit		
Newsletters		
Media communication, press releases		
Audio-visual material (video)		
Demonstration/participation in exhibitions/events		1
Social media posts		
News posts	3	3

Publications in conferences/journals	1	2
Workshops/special sessions	1	
Networking and clustering activities		
Communication with potential clients		1

TU/e has decided to keep un-altered it original dissemination activities consisting of one participation in an exhibition/event, 3 news posts, 3 publications, the organization of one workshop and the communication with 1 potential client

4.5.6 MDA Hellas

	MDA Hellas	
	Year 3	
	Semester V	Semester VI
Dissemination plan (deliverables)		
Project website		
Communication Kit		
Newsletters	2 (0)	2 (0)
Media communication, press releases	1	1
Audio-visual material (video)	1	
Demonstration/participation in exhibitions/events	0 (2)	1 (3)
Social media posts	30 (20)	30 (20)
News posts		
Publications in conferences/journals		
Workshops/special sessions	0 (1)	0(1)
Networking and clustering activities	2	2 (3)
Communication with potential clients		0 (2)

MDA HELLAS participated in various networking and clustering activities and presented the MAMEM poster in exhibitions and patient organization conferences. Due to the increased interest of the DMD patient community over the MAMEM results, we have decided to increase our participation in patient events. We are planning to inform the community about the findings and the new data available from Phase I Trials, but also to ask their advice as potential users and incorporate their ideas and comments in the design of Phase II. UPPMD the Global Organization for Duchenne Muscular Dystrophy will aid us in the dissemination via their global network of patient organizations.

4.5.7 AUTH

	Aristotle University of Thessaloniki	
	Year 3	
	Semester V	Semester VI
Dissemination plan (deliverables)		
Project website		
Communication Kit		
Newsletters		

Media communication, press releases		
Audio-visual material (video)		
Demonstration/participation in exhibitions/events	3 (2)	4
Social media posts		
News posts		
Publications in conferences/journals	2 (1)	3
Workshops/special sessions		1
Networking and clustering activities		
Communication with potential clients		

AUTH has decided to keep more or less unaltered its dissemination commitments for the last year of the project, reducing only the number of participation to events from 3 to 2 and the number of publications from 2 to 1, both in Semester V.

4.5.8 SHEBA

	Sheba Medical Centre	
	Year 3	
	Semester V	Semester VI
Dissemination plan (deliverables)		
Project website		
Communication Kit		
Newsletters		
Media communication, press releases		
Audio-visual material (video)		
Demonstration/participation in exhibitions/events		
Social media posts		
News posts	1	1
Publications in conferences/journals	2	2
Workshops/special sessions		1
Networking and clustering activities		
Communication with potential clients		

No changes are foreseen for SHEBA that has decided to keep un-altered its dissemination commitments for the last year of the project.

4.5.9 Summary of dissemination activities

Based on the updated plans of each partner we have summarized all commitment in the following table. By looking at the modifications applied on this table we may draw the following conclusions. By going through the table we may draw the following conclusions. We have completely removed the commitment of publishing newsletters in line with the decision outlined in Section 4. We ha slightly increased the number of media communication and press released, as well as the demonstration/participation in exhibitions/events. The number of social media and news post have been slightly reduced but still retained at a high level. The number of scientific publications and participation/organization of workshops/special sessions have been increased, driven by the rich scientific results of our project. Moreover, the number of networking and clustering activities,

as well as the communication with potential clients has been significantly increased reflecting the decision outlined in Section 4 of placing more emphasis on business-related activities.

	MAMEM		
	Year 3		
	Semester V	Semester VI	Sum (3rd Year)
Dissemination plan (deliverables)	0	0	**0**
Project website	0	0	**0**
Communication Kit	0	0	**0**
Newsletters	4 (0)	5 (0)	**0**
Media communication, press releases	1	3 (4)	**5**
Audio-visual material (video)	1	1	**2**
Demonstration/participation in exhibitions/events	3 (6)	12 (14)	**20**
Social media posts	82 (72)	109 (99)	**171**
News posts	46 (36)	52 (42)	**78**
Publications in conferences/journals	7 (8)	12 (13)	**21**
Workshops/special sessions	1 (2)	4 (5)	**7**
Networking and clustering activities	3	6 (8)	**11**
Communication with potential clients	1	3 (6)	**7**

5 Conclusions

The primary purpose of the present deliverable was to present the dissemination activities of the MAMEM project within the 24 months of the project duration (May 2015 - April 2017). It presents the overall dissemination strategy of the MAMEM project. Then, it describes the efforts that were put from the project during this period, toward establishing dissemination and communication activities in line with the defined dissemination strategy and plans.

With respect to the project's dissemination strategy, after the first, essential step of the identification of the project's dissemination opportunities and target groups, the project's means of dissemination were defined, as well as a detailed impact assessment plan for the project's dissemination activities that shall be kept as reference throughout its duration. The definition of all of the above was aligned with the project's overall dissemination aims as defined in the MAMEM D8.2.

More specifically, the main dissemination targets of the project involve the primary target end users of the MAMEM system, their relatives and caregivers, associations related to the target communities, the ICT assistive technology industry and professionals, focusing on the BCI sector, the general public and of course, the scientific communities related to the project's R&D activities. The project's means of dissemination fall in the scope of publications, events and E- media, whereas the corresponding activities that have been defined in the project's dissemination strategy can be grouped in the categories of: (a) web presence, (b) scientific publications, (c) liaisons with related initiatives and associations, (d) organization/participation in thematic events related to the project, as well as (e) establishment of promotional/dissemination material to support the project's dissemination actions.

Focusing on the core part of the present deliverable, dedicated to the reporting of the project's dissemination activities for this period, it should be first of all pointed out that from the beginning of the project, strong web presence has been established for MAMEM, through the project's website, utilization of social media, as well as through a massive, EU-wide participation where MAMEM has been precisely presented. Moreover, a series of promotional material (e.g. project leaflet, poster, reference presentation etc.) were made available and the first issue of the project's newsletter was circulated in line with the project's dissemination plan. Further to those activities, project partners participated during the reporting period in a series of events to present MAMEM and established liaison with several initiatives and associations related to the MAMEM project. In addition, the project already established publications in scientific conferences and journals.

6 References

[1] MAMEM's Questionnaire Serving as Dissemination Reporting Mechanism- url: https://docs.google.com/forms/d/e/1FAIpQLSfGK4DHIxzHfQbkNDR7suVUuqUNAhArDVEiTIpY8YpCvrqL2g/viewform

[2] MAMEM Consortium, "D8.2 – Dissemination Plan", October 2015, url: http://mklab.iti.gr/mamem/images/2/2d/D8.2_DisseminationPlan_Final.pdf (requires authentication)

[3] Description of Actions - Readable form (requires authentication): http://mklab.iti.gr/mamem/images/3/32/PartB_MAMEM.pdf

A Appendix MAMEM On-line Presence

- **Official Project Website**
  http://www.mamem.eu/

- **Twitter**
  https://twitter.com/mamem

- **Google+**
  https://plus.google.com/u/0/b/102671396619707753364/102671396619707753364/posts

- **LinkedIn**
  https://www.linkedin.com/in/mamem/

- **Facebook**
  https://www.facebook.com/mamemeu/

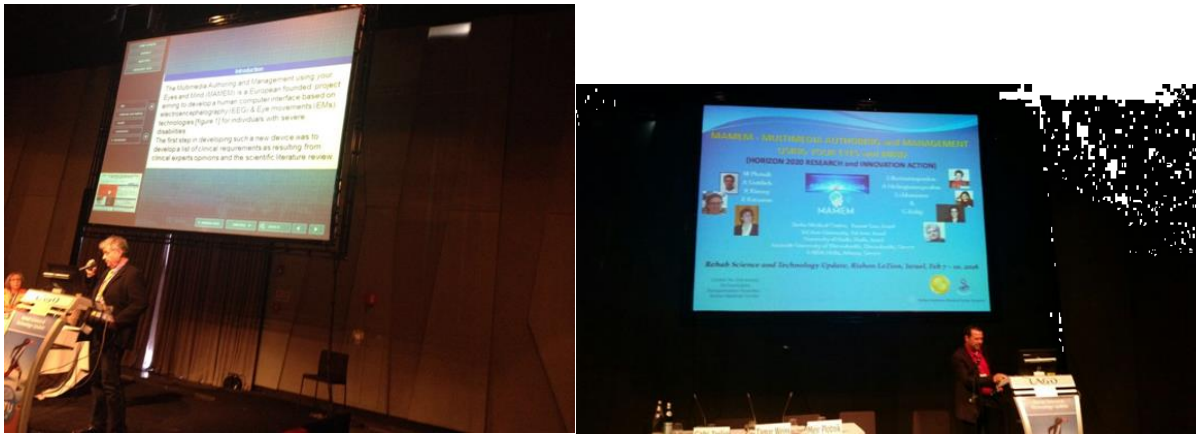
- **MAMEM at ITI Main in English and Greek (CERTH)**
  http://www.iti.gr/iti/projects/MAMEM.html

- **MAMEM at ITI Multimedia Group (CERTH)**
  http://mklab.iti.gr/projects/mamem

B Appendix – Visual material from our dissemination activities

In the Appendix we provide visual material from our dissemination activities that can be also accessed through http://www.mamem.eu/news/.

MAMEM at Actions Duchenne International Conference LONDON Nov 11th-12th 2016



MAMEM presented in the "Rehab Science & Technology Update" in the city of Rishon Letzion Israel

MAMEM @ 15th International Conference On Duchenne And Becker Muscular Dystrophy, Rome, Italy

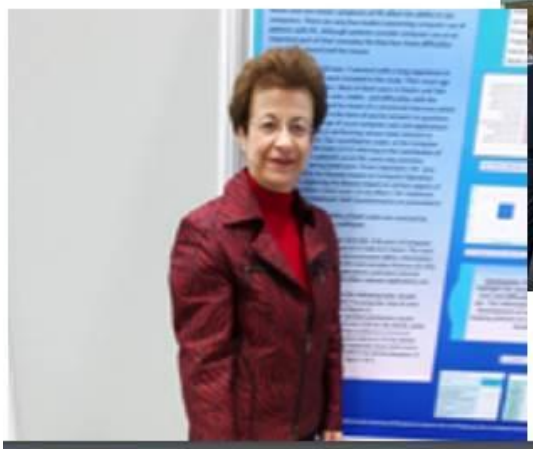
MAMEM at Neurology Congress in Paris, Oct 2016

MAMEM @MEDICATradeFair 2015, Düsseldorf, Germany

MAMEM @ 10th Panhellenic Conference on Alzheimer's Disease and Related Disorders and 2nd Mediterranean Conference on Neurodegenerative Diseases, Thessaloniki Greece, Workshop

MAMEM @ Annual General Assembly in Cyprus Institute of Neurology and Genetics

MAMEM @the 9th Nordic Conference on Human-Computer Interaction, Gothenburg, Sweden



Abstracts by Topic

1552 Improving clinical detection of balance deficits in individuals with Parkinson's disease with and without freezing of gait and the effects of dopaminergic replacement therapy
K.A. Ehgoetz Martens, C.G. Ellard, Q.J. Almeida (Camperdown, Australia)

1553 Pisa syndrome in a drug-naive Parkinson's disease patient
P. Solla, A. Cannas, M.M. Mascia, M. Mancino, D. Picciau, R. Farris, G. Orofino, L. Cugusi, L. Polizzi, F. Marrosu (Monserrato (Cagliari), Italy)

1554 Freezing of gait is associated with more fear of falling avoidance behavior and less participation in daily physical activity
M.R. Landers, B. Poston, J. Nash, J. Longhurst (Las Vegas, NV, USA)

Rating Scales

1555 Disability is an independent predictor of falls and recurrent falls in people with Parkinson's disease without a history of

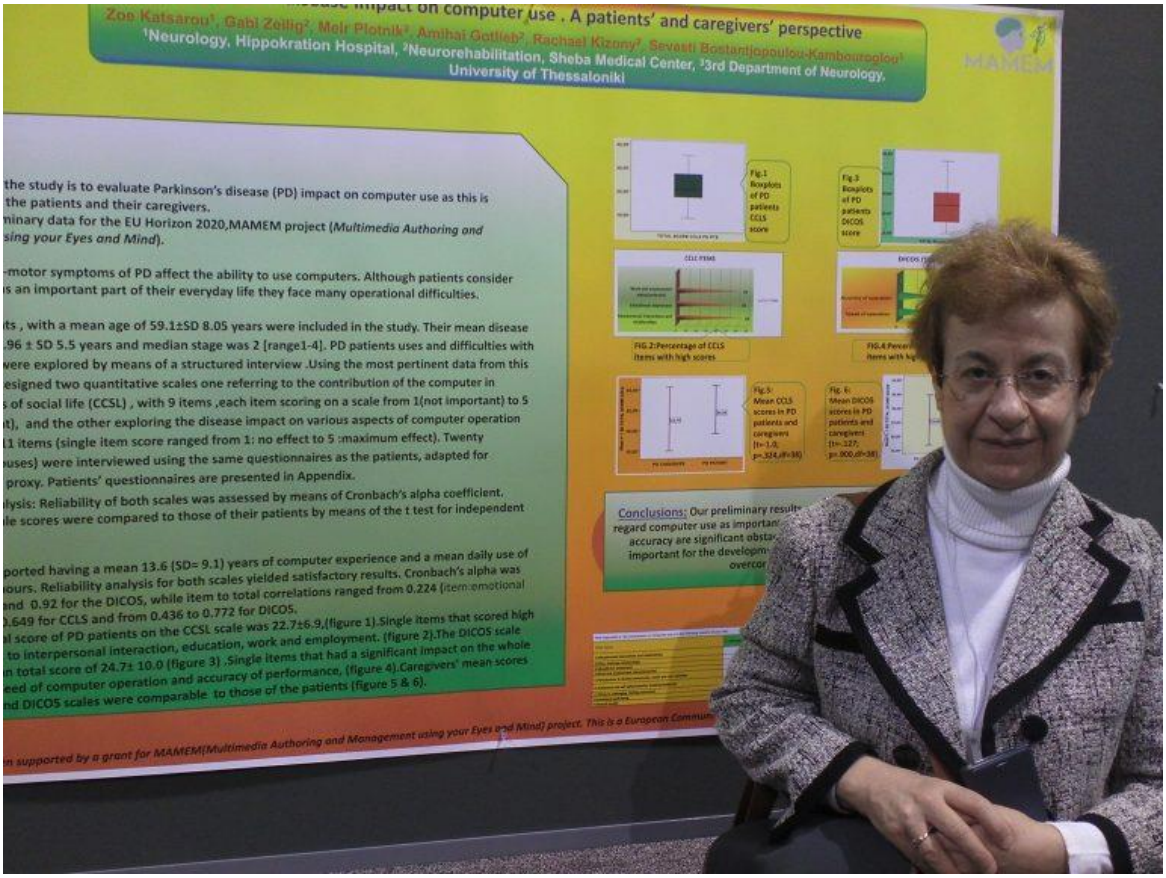
1562 Computer uses and difficulties in Parkinson's disease
Z. Katsarou, M. Plotnik, G. Zeilig, A. Gottlieb, R. Kizony, S. Bostantjopoulou (Thessaloniki, Greece)

19-items wearing-off questionnaire in Mexican patients with PD
D. Cruz-Fino, A. Alvarado-Bolaños, M. Rodríguez-Violante, A. Cervantes-Arriaga (Mexico City, Mexico)

1564 Gender and age-based differential item functioning (DIF) analysis of MDS-UPDRS
C.G. Goetz, L. Wang, G.T. Stebbins, B.C. Tilley, S. Luo (Chicago, IL, USA)

1565 A step forward to the future: UPDRS kinematic measures for telemedicine
G. Albani, C. Azzaro, F. Parisi, C. Ferraris, M. Giuberti, L. Contin, D. Pianu, L. Pradotto, V. Cimolin, N. Cau, M. Galli, R. Nerino, G. Ferrari, A. Mauro (Piancavallo, Italy)

MAMEM@ MAMEM-related material at the 20th International Congress of Parkinson's Disease and Movement Disorders



MAMEM @ AAN 2017, April 22-28, 2017 in Boston, USA

MAMEM receives one out of ten offered stipends among 100 applications to present ERP findings @ 2nd Annual Global Brain Health Institute (GBHI) Conference April 19 – 22, 2017 in Barcelona, Spain

MAMEM gets two papers accepted @ 8th International IEEE EMBS Conference on Neural Engineering May 25-28, 2017 in Shangai, China

EUROPEAN JOURNAL OF NEUROLOGY
Volume 23, Supplement 1, May 2016

Abstracts of the 2nd Congress of the European Academy of Neurology

Neurorehabilitation 3

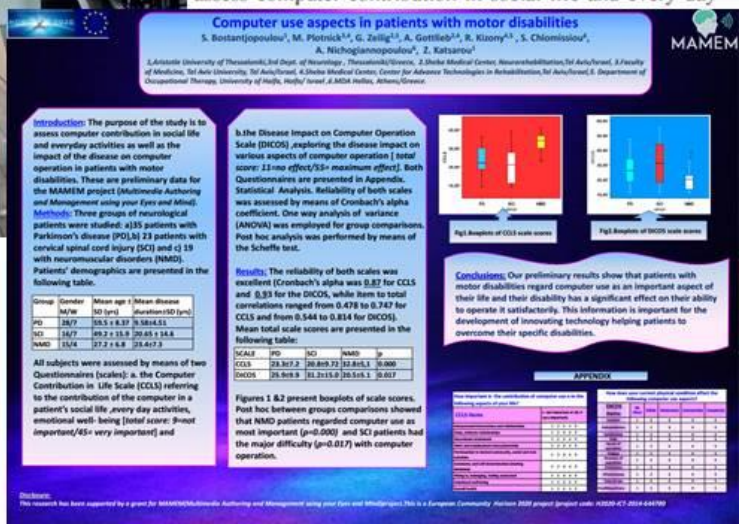
P31237

Computer use aspects in patients with motor disabilities

S. Bostantjopoulou[1], M. Plotnick[2], G. Zeilig[2], A. Gottlieb[3], R. Kizony[4], S. Chlomissiou[5], A. Nichogiannopoulou[5], Z. Katsarou[1]

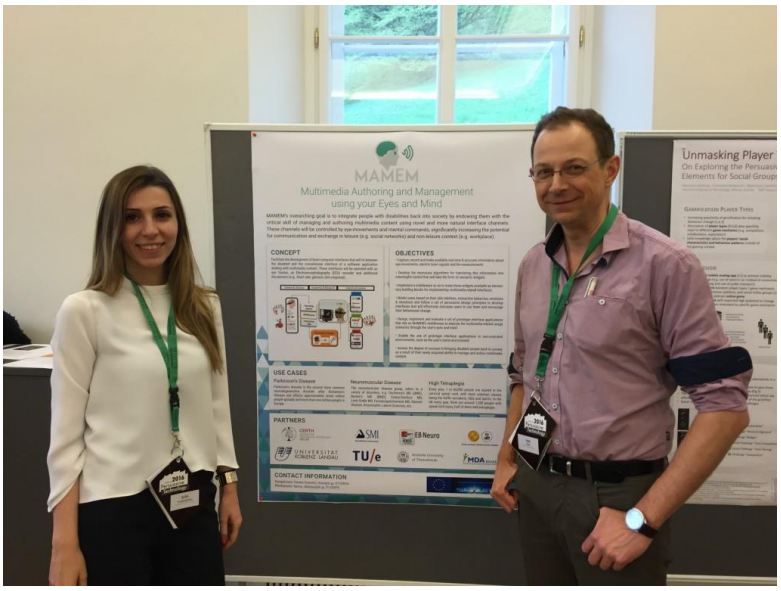
[1]3rd Neurology, Aristotle University of Thessaloniki, Thessaloniki, Greece, [2]Neurorehabilitation, Sheba Medical Center, Tel Aviv, Israel, [3]Neurorehabilitation, Sheba Medical center, Tel Aviv, Israel, [4]Center for Advance Technologies in Rehabilitation, Sheba Medical Center, Tel Aviv, Israel, [5]MDA Hellas, Athens, Greece

Background and aims: The purpose of this study is to assess computer contribution in social life and every day



MAMEM@ MAMEM results on computer use aspects in patients with motor disabilities presented @EAN2016

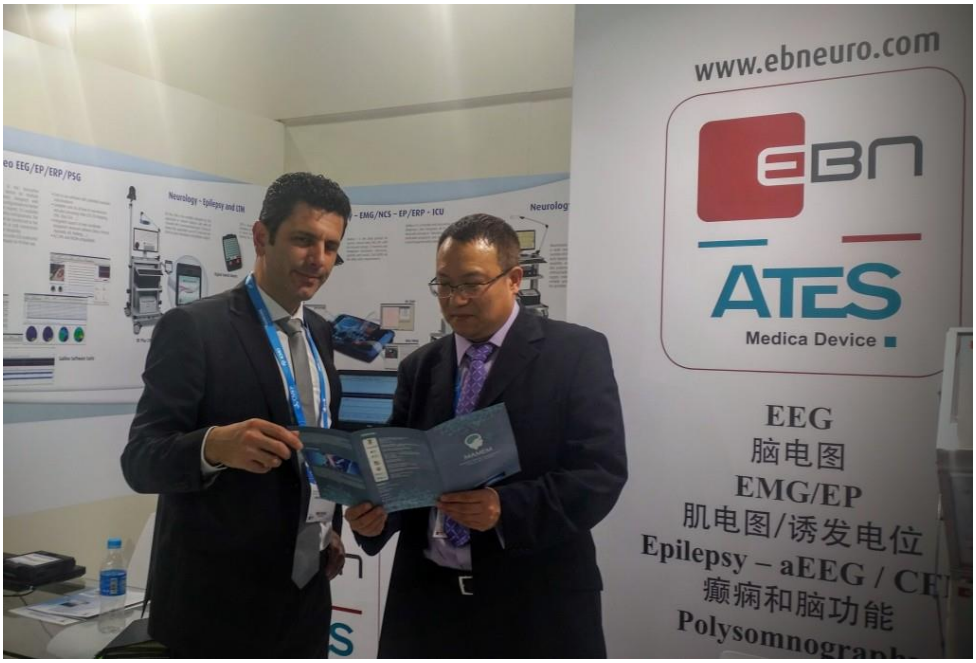
MAMEM's clinical requirements presented @ ESPRM 2016 (20th European Congress of Physical and Rehabilitation Medicine), in Lisbon Portugal



MAMEM presented @ the 11th International Conference on Persuasive Technology

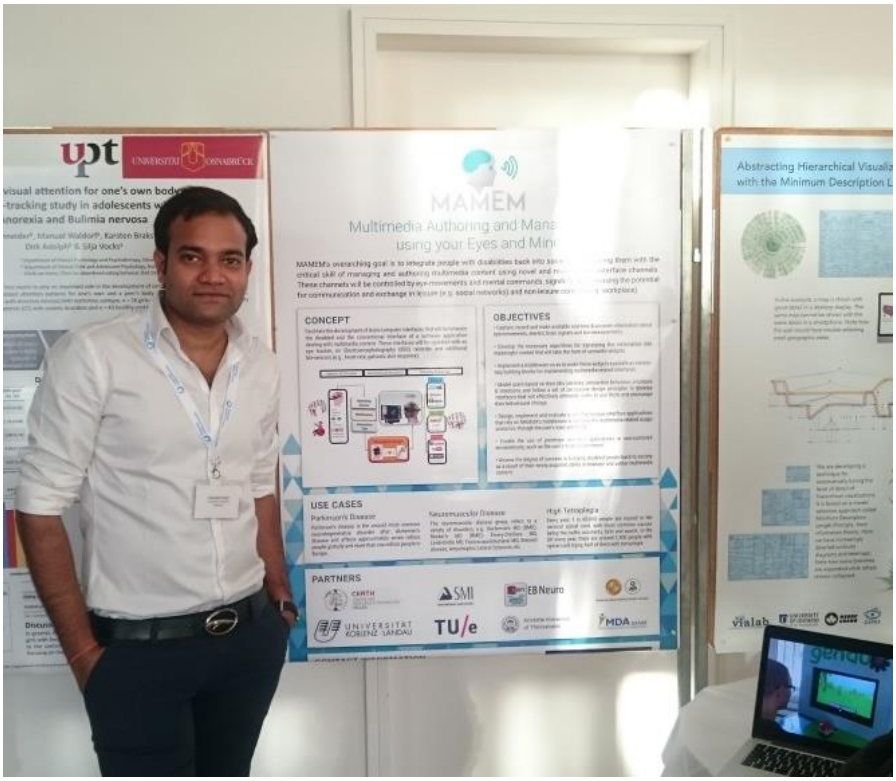
Mamem @ Arab Health Trade Fair 2016, Dubai, UAE

GazeTheWeb: A MAMEM prototype demonstration at the 30th anniversary of the EINST e.v. Koblenz

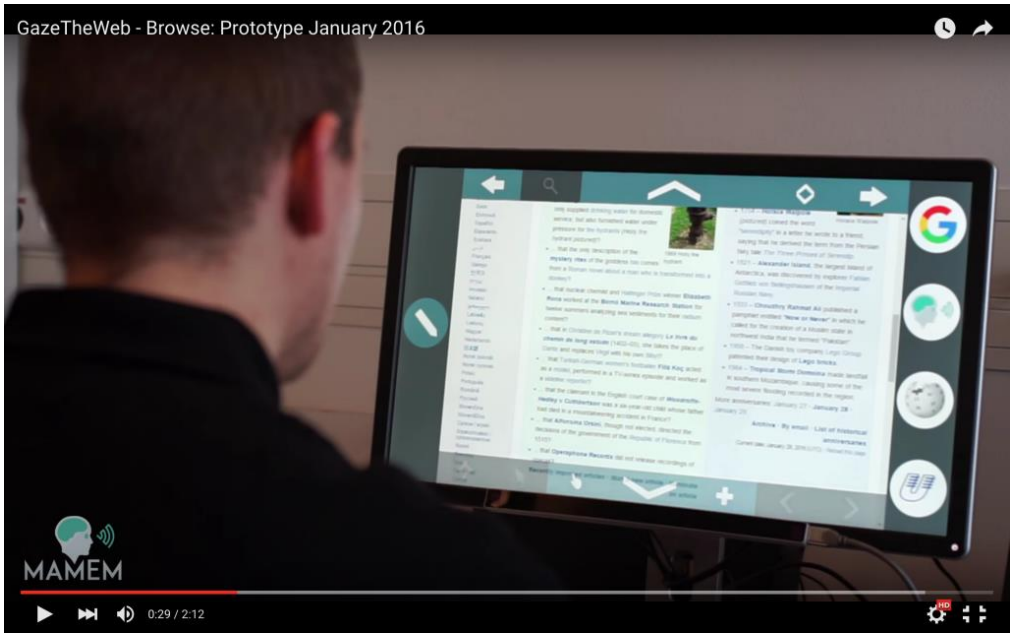


MAMEM @ CMEF Trade Fair 2016, Shanghai, China

MAMEM@ ICT-2015, Lisbon – Portugal



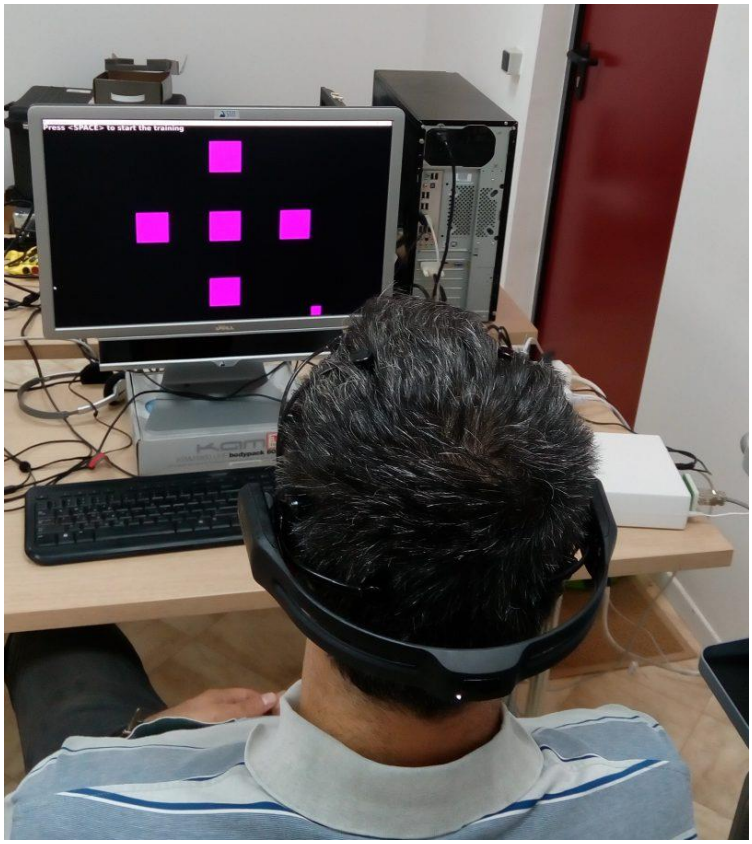
MAMEM at the Winter School of Eye Tracking Monte Verita, Switzerland



MAMEM makes publicly available the prototype “GazeTheWeb” to support Web browsing through eye movements

Post in Social media MAMEM during phase experiments.

Post in Social Media MAMEM completed Phase I Trials for the NMD Cohort



Post in Social Media MAMEM compares the performance of SSVEP-based BCIs across different EEG devices

Post in Social Media MAMEM meets people with neuromuscular disorders

MAMEM reaching out to young people in Researchers' Night, Thessaloniki, Greece

MAMEM reaching out to the general public in a street event for the National Day against Parkinson Disease

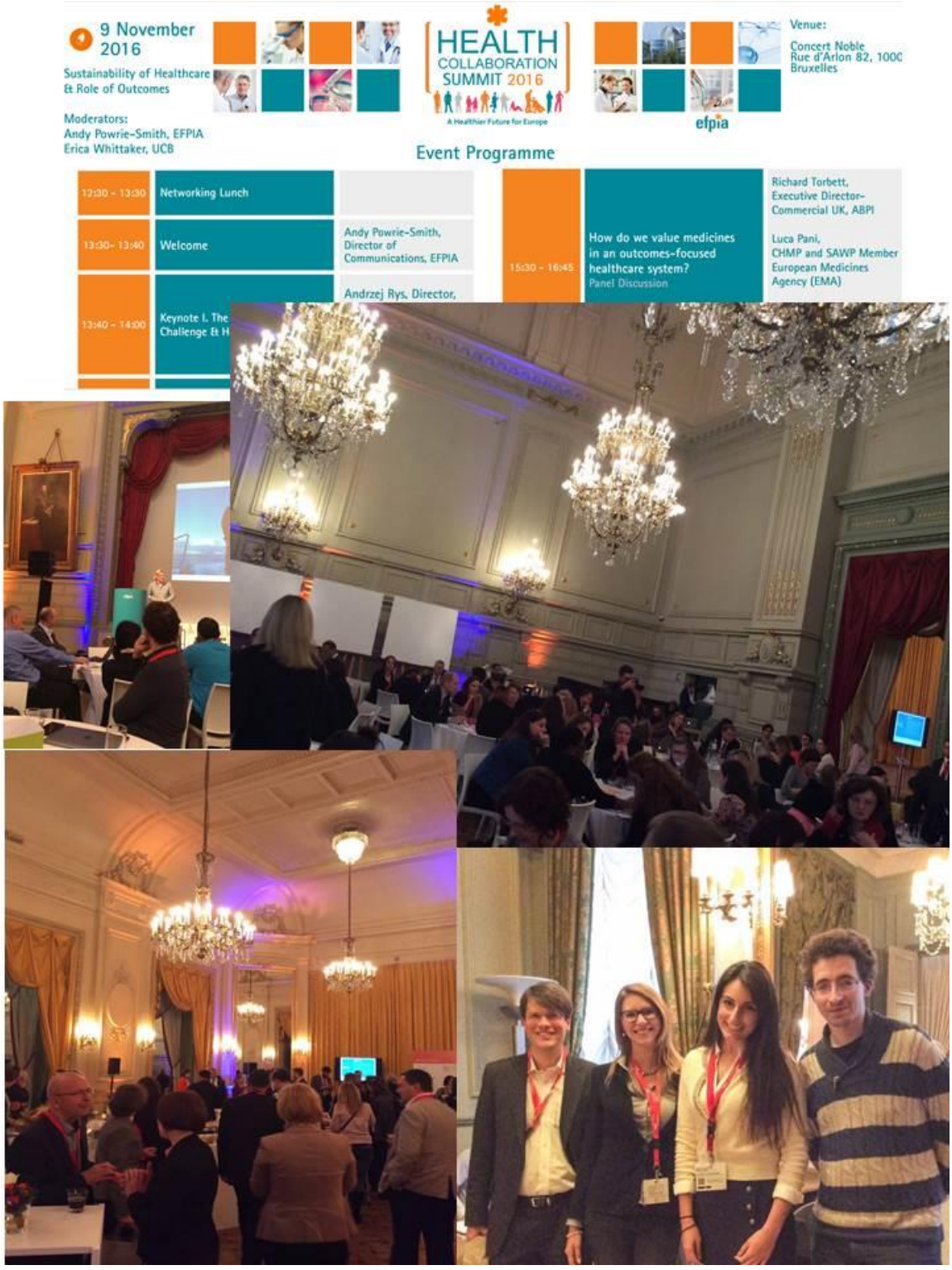
MAMEM in the Research Day of Sheba Medical Centre

MAMEM introduces SSVEPs to high-school students

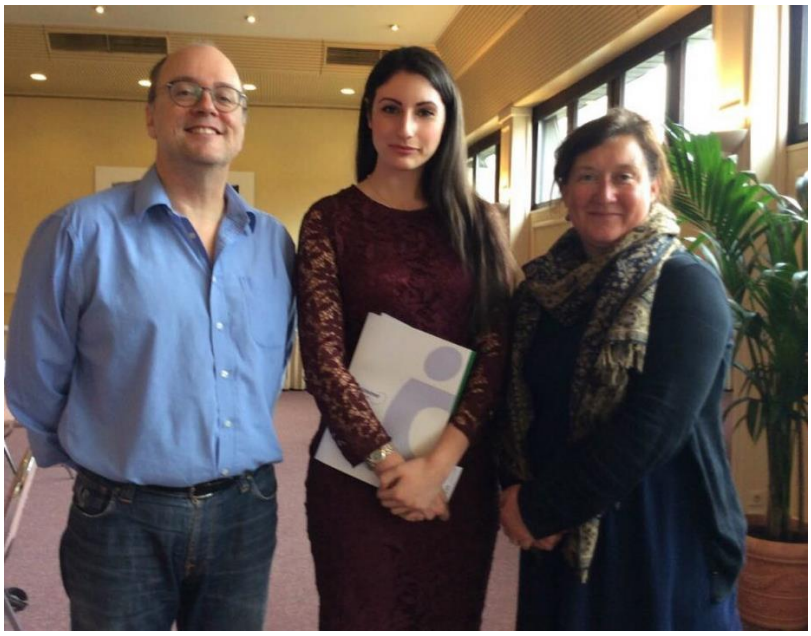
MAMEM @European Student Parliament in Greece

MAMEM@ United Parent Projects Muscular Dystrophy (UPPMD) International Meeting

MAMEM @IMI Workshop on "Patient Engagement Strategy for Innovative Medicines”



MAMEM @EFPIA event on "Health Collaboration Summit 2016, a healthier future for Europe in Brussels, Belgium



MAMEM @Annual Alzheimer's Europe meeting in Luxembourg 27th of Feb-1st of March 2017

MAMEM @ World Parkinson's Disease Day in Thessaloniki, Greece

MAMEM @ADI Workshop on “Participation of Greek Alzheimer Units in Founding Opportunities” Athens, Greece

C Appendix – Intended Publications with Tentative Titles and Venues

Partner	Title (Tentative)	Venue (Tentative)	Publisher (if applicable)
Under review/revision			
CERTH	EEG-based brain computer interfaces for communication and rehabilitation of people with motor impairment: a novel approach of the 21st century	Journal of Frontiers in Human Neuroscience	Frontiers
CERTH	A collaborative representation approach to detecting Error-Related Potentials in SSVEP-BCIs	ACM Multimedia 2017	ACM
CERTH	Attractor Codewaves: a nonlinear dynamics approach to SSVEP recognition for asynchronous BCI	Journal of Neural Engineering	IOP Publishing
UNI KO-LD	Usability Heuristics for Eye-Controlled User Interfaces	COGAIN - European Conference of Eye Movements	JEMR
To be submitted			
CERTH	CCA-SVM: A method for real world SSVEP applications	ACM Multimedia	ACM
CERTH	Sparse Bayesian Learning with Multiple Kernels for Multiclass Classification - An application to SSVEP- BCI	Transactions on Neural Systems and Rehabilitation Engineering	IEEE
CERTH	Optimal Configuration of a motor BCI experiment based on Multiple Kernels Learning	IEEE Neural Engineering EMBS conference	IEEE
CERTH	Error-aware gaze-based keyboard	Journal of Neural Engineering	IOP Publishing
CERTH	Neuromuscular Disorders favoring SMR	IEEE Neural Engineering EMBS conference	IEEE
CERTH	Playing Tetris using your eyes and mind	ICME 2018	IEEE
CERTH	Can a Novel High-Density EEG Approach Using Visual Event Related Potential (N170), Elicited by Emotional Stimuli, Provide Additional Robust Information for Subjective	Journal of Alzheimer's Disease	IOS press

	Cognitive Impairment?		
UNI KO-LD	Gaze-Controlled Web Browsing: Performance and Feasibility Analysis	ACM Transactions on Accessible Computing	ACM
UNI KO-LD	Adaptive dwell time for gaze input optimization	ACM CHI Conference on Human Factors in Computing Systems	ACM
UNI KO-LD	Drift corrected gaze pointing	ACM SYMPOSIUM ON EYE TRACKING RESEARCH & APPLICATIONS - ETRA	ACM
TU/e	The influence of behavioral modelling by an artificial social agent of assistive technology acceptance and use	International Journal of Human-Computer Interaction	Taylor and Francis
TU/e	The influence of incorporating persuasive strategies in assistive technology on training acceptance	Conference proceedings of Persuasive 2018, Waterloo, Canada	Springer
TU/e	Personalization of persuasive strategies and assistive technology training performance and acceptance	Conference proceedings of Persuasive 2018, Waterloo, Canada	Springer
Sheba	Assessment of clinical requirements from a novel assistive device for people with a high spinal cord injury using questionnaires, a focus group and a literature survey	International Journal of Human-Computer Studies	Taylor & Francis
Sheba	Evaluation of a computer operating assistive device for people with a high spinal cord injury - a controlled study	Transactions on Neural Systems and Rehabilitation Engineering	IEEE
Sheba	Evaluation of a computer operating assistive device for people with a high spinal cord injury - a field study	Journal of NeuroEngineering and Rehabilitation	BioMed Central
Sheba	Evaluation of a computer operating assistive device for people with a high spinal cord injury, Parkinson's disease or neuromuscular disorders - results of a cross-cohorts analysis	Archives of Physical Medicine and Rehabilitation	ACRM
AUTH	Healthy subjects'	Journal of Motor	Taylor &

	computer performance using a gaze based assistive device	Behavior	Francis
AUTH	Parkinson's disease impact on computer operation by means of a gaze based assistive device	Parkinsonism and Related Disorders	Elsevier
AUTH	User satisfaction of computer operation by means of a gaze based assistive device. Comparison between patients with Parkinson's disease and normal subjects	European Journal of Neurology	Wiley
AUTH	Parkinson's disease impact on computer use:Correlation with clinical parameters	Journal of Parkinson's Disease	IOS Press Publisher
ALL PARTNERS	The MAMEM Project - A dataset for multimodal human-computer interaction using biosignals	ACM Transactions on Accessible Computing	ACM