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# **MeMAD Deliverable**

D7.3 – Summary of dissemination and communication activities

Version 2.0

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#### Abstract

This document contains the summary of dissemination and communication activities performed during the course of the project (January 2018 -March 2021) by all the partners in the consortium:

- Publications in a wide array of scientific journals and conference proceedings
- Participation and organising of a large number of conferences, seminars and events throughout Europe and also US and Asia (participation primarily taking place remotely after March 2020 due to the COVID-19 pandemic)
- Engagement of an External Collaborators Group with representatives from the Creative Industries
- Collaboration with other projects and initiatives, including joint events
- Social media and website postings
- Publication of open source code and technical deliverables through Github

The project also received media attention in European media, particularly in Finland and France.

Additionally, an overview of the dissemination and communication plan and its evolution during the project is provided in this document.

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# **1** Introduction

During the course of the MeMAD project, the consortium engaged in a wide array of dissemination activities, the objectives of which were:

- Commercial and academic dissemination of project results to the Creative Industries, the research communities and other stakeholders.
- to maximise exposure to and dialogue with stakeholders, to disseminate the outcome to the stakeholders and the public at large, and to support the exploitation of the results.

Dissemination activities were primarily focused on:

- Informing the stakeholder groups of the state-of-the-art developments taking place in the field. Targeted action towards the stakeholder groups was the core of the project's dissemination strategy.
- Disseminating the project results in order to foster community building and to create an impact on industry and research in Europe and worldwide.
- Identifying and promoting areas of exploitation and supporting the application of MeMAD methodologies and technology in relevant industries.

The project identified the following as the main stakeholder groups:

- Creative Industries: Broadcasting companies, content producers including translation and transcreation agencies, and more, broadly, language service providers (LSPs), both SMEs and large companies.
- Research communities in all fields of the scientific areas covered by MeMAD
- Advocacy groups promoting inclusion and accessibility for those with physical and cognitive disabilities. More specifically, reusability and accessibility of audiovisual material for deaf, hard of hearing, blind and partially sighted people, and other audiences who have been shown to benefit from additional audio commentary or subtitles.

The dissemination plan for the project was first outlined in *D7.1: Business and exploitation plan, first version including communication and dissemination strategy* and subsequently maintained and updated during the course of the project. All partners in the project played active roles in dissemination.

Chapter 2 provides an overview of the dissemination plan and its evolution during the course of the project and also highlights the outcomes in terms of generation of new research and commercial projects and collaboration.

Chapter 3 provides the full list of dissemination activities carried out during the project.

The commercial collaboration and exploitation of the project results are further described in a separate deliverable, *D7.2: Business and exploitation plan, final version.* 

# 2 Summary of the Dissemination Plan and Outcomes

## 2.1 Introduction

This section provides an overview of the project dissemination plan, how it evolved during the course of the project and the outcomes. The MeMAD consortium outlined the first versions of the dissemination plan in 2018; the initial versions of this plan were included in the deliverable *D7.1* : *Business and exploitation plan, first version including communication and dissemination strategy* and its subsequent revised version.

# 2.2 Target Audience for Dissemination

The main target audiences were the following:

- Primary (industry) targets: Facilitating companies that are recognised as trusted parties by potential end-users and that we envisage as Point of Sales (PoS) for MeMAD technologies, including post-production facilities and archive operators;
  - Secondary (industry) targets: producers and distributors of professionally produced content that potentially have an interest in the services and products resulting of the MeMAD project;
- Influencers that can magnify the awareness in publications and using social media: Experts and researchers interested in the same topics as MeMAD is working on;
- Advocacy groups promoting inclusion and accessibility for those with physical and cognitive disabilities;
- Research communities in all fields of the scientific areas covered by MeMAD: The multimedia analysis research community, the computer vision community, natural language processing community, semantic technologies community and the speech and audio recognition community. Other relevant research communities, including Information Science, Film and Television Studies, Digital Humanities.

Stakeholders representing all above groups were intended to form the **external collaborators group** of the project, and the initial intention was for this group to function as one of the central dissemination channels for the project — ultimately, the group principally consisted of representatives from the Creative Industries. The project also maintained a stakeholder database for targeted dissemination.

# 2.3 Dissemination Coordinator

The WP7 leader functioned as the **dissemination coordinator**; the main responsibilities of the coordinator were

- Maintaining the communications matrix and ensuring that it is followed by all partners;
- Ensuring regular content updates for the web page, engaging with all project partners in creating content for the website;
- Coordinating social media activity;
- Creating and maintaining a detailed stakeholder database, in cooperation with the project partners.

# 2.4 Website

The project website, <u>www.memad.eu</u>, served multiple roles:

- as a communication resource to promote the project and its objectives
- as a communication resource to update interested parties on progress, results and outcomes
- as the repository for public deliverables.

Key features of the website included:

- News, blog and events section regularly updated throughout the project's lifetime with news on the project as well as external news relevant to MeMAD. It also included all the events organised by the MeMAD consortium as well as events where MeMAD partners are going to be represented and any other events of interest to the partnership.
- Repository of public deliverables and results.
- Videos demonstrating the project results (also published on YouTube).

In the later stages of the project, a separate landing page for the projects' final webinars (<u>https://memad.eu/webinars/</u>) were added, with the recordings of the webinars subsequently added to the page.

The website also hosted the landing pages of the AI4TV workshops of 2019 (<u>https://memad.eu/ai4tv2019/</u>) and 2020 (<u>https://memad.eu/ai4tv2020/</u>). It will also host the 2021 edition which has again be accepted as a full day workshop at ACM Multimedia.

Google Analytics was used on the website to provide insights on visitors, referrals and page views, so as to inform the website updates. SEO is performed on each published page with the aid of Yoast's SEO solutions.

#### 2.4.1 Identified website improvement needs

The first version of the MeMAD website was produced and published in early 2018. A number of improvement suggestions have subsequently been noted for the website, which were implemented during 2019.

The goals with these changes were:

- To make it immediately clear to the visitor what the project is about and to pique their interest; bring the "wow" factor and reduce the bounce rate
- To make it easier to find the relevant information and to reduce confusion and cognitive overload when navigating the website
- To improve demonstration of the project results and to provide concrete examples of what the project is accomplishing

Item	Comments	Result
Picture carousel on front page	Add a bit of dynamism to the front page	Implemented by using fades to transition between pictures
Slogan/mission statement on front page	What the project is about in a nutshell, e.g. "We revolutionise digital storytelling"	Implemented
Remove big logo - replace with photos	Logo is now there twice on the front page and doesn't really inform the visitor what the project is about	Implemented
Consistent top-level menus (some are clickable, some are not)		Partially implemented;
Merge events and presentations	Superfluous sections that result in a more confusing browsing experience	Implemented
Case studies (use cases / real-world applications)	Replace current use case descriptions with these	Not implemented
Merge blog and press releases	Superfluous (press release section rarely updated)	Implemented; also the News pages was merged
Youtube channel + videos	More video content sorely needed!	Implemented
Github in social icons (link to the MeMAD repos)	Very important dissemination channel!	Implemented

The items were as follows, in no particular order of priority:

Merge events and		
presentations	Advertise events beforehand	Implemented

Table 1: Improvement suggestions for the MeMAD website.

## 2.5 YouTube channel

The project set up a Youtube channel in

(<u>https://www.youtube.com/channel/UCbGARa6Kuov4faYydgqftIQ</u>), primarily to host demo videos of the project results, and subsequently webinar video recordings. Additionally, the partners used their own channels sporadically for posting video material pertaining to the project.

## 2.6 Dissemination Matrix

The primary dissemination activities of the project are outlined in the matrix below. The activities ranged from one-off to frequently recurring, covering a number of channels and stakeholders. Specific items of the matrix are elaborated in subsequent sections. Deviations from the original plan are also highlighted below the matrix.

Audience	Purpose	Medium	(Start) Date	Freq.	Owner
External collaborator group	Inform of project progress and validate with stakeholders	E-mail / Webinars	1.1.2019	Bi-Monthly	Limecraft
General scientific audience	Inform of project progress	Blog / Website	1.1.2018	Monthly	Lingsoft
Inclusion and Accessibility groups	Targeted demo of the prototype	Video / prototype	2019	Quarterly	Limecraft
Creative Industry	Targeted demo of the prototype	Video / prototype	2019	Quarterly	Limecraft
Project members	Project plenary	Seminar / Workshop	2018	Bi-annual	All partners
Inclusion and Accessibility groups Creative Industry Research community	Kick-off seminar: presenting the new project to stakeholders	Seminar	19.1.2018	Once	Aalto
Inclusion and Accessibility groups Creative Industry Research community	Follow-up on project progress and results	Seminar	20.1.2020	Once	Lingsoft

Inclusion and Accessibility groups Creative Industry Research community	Closing seminar	Seminar	10.2020	Once	Aalto
General scientific audience	Project start	Press release	19.1.2018	Once	Lingsoft
General scientific audience	Project end results	Press release	end of 2020	Once	Lingsoft
Creative Industry	Commercial exploitation and customer acquisition	Trade fair / Industry event	19.1.2018	See list of events below	Industry partners (Limecraft, Lingsoft, Yle, INA)
Research community	Presenting project results	Conference / Event	19.1.2018	See list of events below	Academic partners
Inclusion and Accessibility groups	Presenting project results, validating assumptions with stakeholders	Seminars	19.1.2018	See list of events below	All partners

Table 2: MeMAD Dissemination and Communication matrix.

## 2.6.1 Deviations

The following deviations from the dissemination plan occurred:

- Involvement of the External Collaborations Group and targeted demos: The group principally consisted of representatives from the Creative Industries, rather than representatives from all stakeholder groups as originally envisioned. The primary reason was the focus on the production-side usage of tools and platforms developed in the project.
- Project extension: the original end date of the project was pushed forward three months, to March 31, 2021, thus necessitating a change in the timetables for the dissemination work.
- Impact of COVID-19: the project deadline was extended as noted above, and most dissemination activities were performed online from March 2020 and for the rest of the duration of the project.
- Press releases and newsletters: These were ultimately phased out in favour of using the blog and the website for dissemination.

## 2.7 Blog posts

Each partner was assigned publication dates for blog posts publication during the course of the project.

The original intended frequency was at least one new blog post per month, though the frequency ultimately varied throughout the project; especially in the first half of the project, we fell behind on the blog schedule, though were able to compensate by producing blog posts more frequently in subsequent years.

All told, 37 blog posts were published during the course of the project, covering the different target audiences of the project (Creative Industries, research and accessibility advocacy).

## 2.8 Social Media

The project participants used their own social media accounts to raise awareness of the project, with the appropriate hashtags (<u>#memad</u>) and links to the MeMAD website. The target was to drive traffic to the website, and have the website as the primary information hub for the project.

The MeMAD project had social media accounts on Twitter (<u>@memadproject</u>) and LinkedIn (<u>https://linkedin.com/company/memad-project</u>/). The accounts functioned partially as reposting for specific hashtags (<u>#memad</u> and <u>#memadproject</u>) and mentions, but primarily functioned as a complement to the project participants' social media posts in their own accounts.

## 2.9 Newsletters and press releases

The newsletters will be consolidated into the blog/news section of the website and will not be provided separately following the consolidation.

## 2.10 Events

Project participants actively participated in relevant external events, such as conferences, trade fairs, seminars, webinars and poster sessions, the full list of which can be found in section 3.3 below. Due to the COVID-19 epidemic, practically all dissemination activities requiring physical presence from March 2020 onwards were either cancelled, postponed or arranged online. In lieu of a more traditional end event, the consortium arranged three webinars in January and February 2021, presenting the project results for each of the three main stakeholder groups: Creative Industries, Research, and Accessibility.

## 2.11 Commercial collaboration and exploitation of results

The commercial partners in the project engaged in collaboration and exploitation activities, both as joint efforts, as well as individual ventures.

- Lingsoft Language Services created a subtitling service, based on the Limecraft platform incorporating several microservices delivered by MeMAD, used by public sector companies in the Nordics (customers who are covered by the EU Web Accessibility Directive and are legally required to provide subtitles for video material intended to be online for longer than 14 days). Speech recognition and other language technologies are used extensively, and the service is one of Lingsoft's fastest growing business horizontals.
- Limecraft incorporated several microservices delivered by other partners of the MeMAD project, and made this available as a whole solution to service providers like Lingsoft Language Services. Apart from Lingsoft, a number of other Language Service Providers (LSP) started using the Limecraft platform at the core of their operational architecture, including Iron Mountain Entertainment Services (US), Haymillian (UK) and True Subtitles (Argentina/Spain). We've also been able to contract a number of large broadcasters that are insourcing subtilling activities, including the ITV, NRK (Norway), SVT (Sweden) and others. Apart from clean-cut language services, MeMAD services are also used to index pre-existing or newly created stock of

audiovisual material at scale, a service delivered to all 85 customers of Limecraft with the Associated Press as the most prominent illustration. In a next phase, Limecraft plans to use more advanced combinations of AI to automate the editing process, which we exposed as an IBC challenge<sup>1</sup>

• Lingsoft Language Services created a subtitling service for public sector companies in the Nordics (customers who are covered by the EU Web Accessibility Directive and are legally required to provide subtitles for video material intended to be online for longer than 14 days). Speech recognition and other language technologies are used extensively, and the service is one of Lingsoft's fastest growing business horizontals.

Commercial exploitation is further detailed in the deliverable D7.2 : Business and exploitation plan, final version.

## 2.12 Links and collaboration with other projects and initiatives

The project actively pursued collaboration and synergies with other projects and initiatives throughout Europe:

- The Horizon 2020 **ReTV** project (retv-project.eu), and the organization of joint workshops with them (<u>https://memad.eu/ai4tv2019/</u> and <u>https://memad.eu/ai4tv2020/</u>) and joint seminars (<u>https://retv-project.eu/datatv2020/</u>).
- We liaised with the **EU Media Road** project (<u>https://www.mediaroad.eu/</u>) which aims to bring together industry trial programs from around Europe, and which could provide a fertile proving ground for MeMAD prototypes.
- **European Language Grid** two of the project partners (Lingsoft, Helsinki) have received funding in the first call for pilot projects of the European Language Grid (ELG) in 2020. Ten projects in total out of 110 applications were funded! These two pilot projects will provide NLP tools via the ELG platform for research and development. While not all of the tools are developed in the MeMAD project, this funding provided an opportunity to also make new development from the MeMAD project available.
- The Post and Telecom Authority of Sweden-funded project *Lingsoft Delta*, a project concerning development of a platform for accessible webcasts. The project is conducted by *Lingsoft Sweden*, a Swedish sister company of Lingsoft and Lingsoft Language Services. The project has established contacts with multiple accessibility interest organizations in Sweden, and close collaboration with the MeMAD project has benefited both projects.

# 2.13 Innovation Radar

MeMAD project partners received recognition for their accomplishments in 2020. Three project innovations were recognised by the European Commission's Innovation Radar:

• <u>New improved methods for Automated speech/speaker and Named Entity Recognition to generate</u> <u>test descriptions</u> - maturity level **Tech Ready** - Aalto, Lingsoft

<sup>&</sup>lt;sup>1</sup> https://show.ibc.org/call-for-innovation/ibc-accelerator-media-innovation-

programme?utm\_campaign=320219\_IBC%20SD%20TMT%20MAR2021%20Kickstart%20Update&utm\_medium=email&utm\_source=IBC%20%28International%20Broadcasting%20Convention%29&dm\_i=673U,6V2Z,2DZ7KX,SKG8,1

- <u>New methods for people and music identification for more accurate video segmentation</u> maturity level **Exploring** Surrey, INA
- <u>Novel metadata structures to support multimedia content descriptions for searching and browsing</u> maturity level **Exploring** Surrey, EURECOM, INA

# 2.14 External collaborators group (ECG)

The MeMAD consortium set up an external collaborators group (ECG) which includes key users and key researchers from the wide network of research groups and industry organizations that the consortium is connected with. The users were engaged to help represent the multidisciplinary scale and ambition of MeMAD.

The aim of our external collaborators group was to gather insights from these key users and experts in order to provide the project consortium with valuable advice on the following items:

- The technical and scientific direction of the project,
- All aspects of use and potential use of the technologies developed in the project,
- Related dissemination and promotion activities.

Using their input, we have been able to steer the project's goals in the right direction, and we have been able to develop solutions that are both state-of-the-art in terms of research activities but also very relevant to current and future needs of the media production industry.

The participation of members in the external collaborators group was as follows:

- They participated in a use cases survey to steer the projects development requirements in relevant directions. This allowed us to focus on the implementation of those functionalities most desired by industry stakeholders, and at the same time, potentially discard scenarios for which little support is found. (from April till June 2019).
- They provided input (directly or by liaising with colleagues in their respective organizations) to members of the consortium in interviews and requirements definitions, for which we organised a number of webinars and on-site sessions during industry events such as IBC (in 2018 and 2019), NAB (in 2019) or EBU seminars (at various events including the EBU MDN in 2018, 2019 and 2020, and the EBU PTS in 2019 and 2021).
- Members of the ECG and their organisations assisted in the evaluation of the prototypes we developed, in particular on the evaluation of the prototype content description editor application (cf. D5.4, D6.8 and D6.9) and with feedback on new designs of content retrieval interfaces, e.g., by Hotel Hungaria. Representatives from ZDF, RTS and SVT were kind enough to spend long user testing sessions and subsequent evaluation moments to share their views on the developments done and suggest future improvements.
- ECG members provided a forum for a wider dissemination of the project results, especially after the project formally completes, e.g., by setting up extended trials of the prototypes in actual production environments, by engaging in further conversations to turn the prototypes into production-ready tools, and to promote the project results in through their proper professional networks. In particular, with FTV, we setup a Proof-of-Concept (cf. D7.4) and talks are ongoing with SVT, TV2 and RTS on how MeMAD results can now be brought into actual commercial products or become parts of existing media production environments with these prospects.

In turn, the MeMAD project provided members of this group with:

• Insights into the state-of-the-art in R&D on the analysis of video content based on a combination of computer vision techniques, human input and machine learning approaches to derive enhanced automatic descriptions.

• Early access to use and test the outcomes of the MeMAD project to help assess how your organization can benefit from the technologies developed by the consortium. At the end of the project, and after the project, this offer will be extended and we expect to support many organisation with further trails of the platforms developed, combined with each organisation's own materials and workflows.

The candidates for the ECG were selected from organizations that have pledged support for our project with letters of intent, and in addition to those, we have engaged users and researchers that we have a close working relationship with. The various profiles were also selected in such a way to ensure we assembled an ECG that was sufficiently diversified in terms of represented roles and working backgrounds.

In addition, we have also continued talking with the consortium partners' accessibility advocacy networks, for example through the participation in the January 14, 2021 Goethe Institute event by accessibility expert and advocate Sami Virtanen of the Finnish federation of the hard of hearing, and Eija-Liisa Markkula of the Finnish Federation of the Visually Impaired.

# 2.15 Visibility of EU Funding

The following guidelines were part of the dissemination plan in order to provide visibility for funding from the European Union's Horizon 2020 programme.

#### 2.15.1 Disclaimer

All communication related to the project (including electronic communication, using social media, etc.) and all infrastructure, equipment or major results funded under the grant must (a) display the EU emblem and (b) include the following text:

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement **No 780069**. The content presented in this website represents the views of the authors, and the European Commission has no liability in respect of the content.

In social media posts it is sufficient that a shorter disclaimer is included in the project description. Further instructions can be found in <u>European Commission's social media guide</u>.

## 2.15.2 Hashtag in Social Media

It was voluntary but highly recommended to add

#H2020 to your tweets. Be part of the online conversation about Horizon 2020 and your tweets become searchable.

tag @EU\_H2020 in your tweets. Relevant posts are sometimes shared on EU social media accounts.

# 3 List of Dissemination Activities 2018 - 2021

The complete list of dissemination activities carried out during the course of the project is listed below.

## 3.1 Publicity

The MeMAD project has received mentions and publicity in English, French and Finnish-language media during 2018 - 2021 (here listed in chronological order):

#### 3.1.1 l'MTech (France)

September 24, 2018 Putting sound and images into words (English) https://blogrecherche.wp.imt.fr/en/2018/09/24/putting-sound-images-words/

April 9, 2018 Des sons et des images en toutes lettres. (French) https://blogrecherche.wp.imt.fr/2018/04/09/memad-sons-images-lettres/

#### 3.1.2 Turun Sanomat (Finland)

March 19, 2018 Mitä oikein tapahtui lukemiselle? (Finnish) https://www.ts.fi/uutiset/maailma/3882339/Mita+oikein+tapahtui+lukemiselle

#### 3.1.3 Satakunnan Kansa (Finland)

March 30, 2018 Neljä lausetta voi olla nykyään liian pitkä teksti lukutaitoiselle – kuvien ja videoiden jakaminen verkossa lisääntyy tekstin kustannuksella (Finnish) <u>https://www.satakunnankansa.fi/maailma/nelja-lausetta-voi-olla-nykyaan-liian-pitka-teksti-lukutaitoiselle-kuvien-ja-videoiden-jakaminen-verkossa-lisaantyy-tekstin-kustannuksella-200843110</u>

#### 3.1.4 Yle (Finland)

Yle is a MeMAD project partner. January 18, 2018 Lauri Saarikoski: Yle valjastaa tekoälyn media-alan voimavaraksi kansainvälisessä tutkimushankkeessa (Finnish) <u>https://yle.fi/aihe/artikkeli/2018/01/18/lauri-saarikoski-yle-valjastaa-tekoalyn-media-alan-voimavaraksi</u>

#### 3.1.5 Verkkouutiset (Finland)

January 18, 2018 Tekoäly opetettiin kuvailemaan videoita (Finnish) <u>https://www.verkkouutiset.fi/tekoaly-opetettiin-kuvailemaan-videoita/</u>

#### 3.1.6 INA (France)

INA is a MeMAD project partner.

March 4, 2019 David Doukhan, À la radio et à la télé, les femmes parlent deux fois moins que les hommes (French) <u>https://larevuedesmedias.ina.fr/la-radio-et-la-tele-les-femmes-parlent-deux-fois-moins-que-les-hommes</u>

#### 3.1.7 University of Helsinki

University of Helsinki is a MeMAD project partner.

December 2, 2019. Ma-chine trans-la-tion, no match for hu-mans: ma-chines trans-late words, hu-mans the un-der-ly-ing mes-sage <u>https://www2.helsinki.fi/en/news/language-culture/machine-translation-no-match-for-humans-machines-translate-words-humans-the-underlying-message</u>

#### 3.1.8 Maaseudun Tulevaisuus (Finland)

August 1, 2020 Tuovi Mäkipere: Tiedätkö, miten Google-kääntäjä toimii ja miksi se kääntää välillä hassusti – tutkija avaa konekäännösten historiaa 70 vuoden ajalta: "Konekäännösten kanssa pitää aina muistaa olla epäluuloinen" (Finnish) <u>https://www.maaseuduntulevaisuus.fi/ihmiset-kulttuuri/artikkeli-1.1153144</u>

August 2, 2020 Tuovi Mäkipere: Kone voi tulevaisuudessa kääntää ja tulkata jopa ääntä – tutkija: "Perusturistille siitä voi olla iloa melko piankin" (Finnish) <u>https://www.maaseuduntulevaisuus.fi/ihmiset-kulttuuri/artikkeli-1.1153883</u>

#### 3.1.9 Helsingin Sanomat (Finland)

January 14, 2021, An overview of the events associated with the annual Night of Sciences event in Helsinki city, including a panel discussion arranged by the Goethe Institut and featuring MeMAD participants.

#### 3.1.10 Yle (Finland)

#### Yle is a MeMAD project partner.

January 14, 2021 Tiina Tuominen and Lauri Saarikoski: Korean kriisi ja zombeja Tornadossa – Ylen kokemuksia automaattisista käännöstekstityksistä (Finnish) <u>https://yle.fi/aihe/artikkeli/2021/01/14/korean-kriisi-ja-zombeja-tornadossa-ylen-kokemuksia-automaattisista</u>

#### 3.1.11 Finnish Translators' and Interpreters' Association SKTL (Finland)

February 2021, Kääntäjien ja katsojien näkemyksiä konekäännetyistä tekstityksistä: MeMAD-hankkeen satoa (Finland)

## 3.2 Publications

#### 3.2.1 WP2 AUTOMATIC MULTIMODAL CONTENT ANALYSIS

<u>2021</u>

Peter Smit, Sami Virpioja, Mikko Kurimo Advances in subword-based HMM-DNN speech recognition across languages Computer Speech & Language, Volume 66, 2021.

Tuomas Kaseva, Hemant Kathania, Aku Rouhe and Mikko Kurimo Speaker Verification Experiments for Adults and Children using a shared embedding spaces Proceedings of the Nordic Conference on Computational Linguistics, NoDaLiDa, 2021 (to appear)

Aku Rouhe, Astrid Van Camp, Mittul Singh, Hugo Van hamme and Mikko Kurimo End-to-end and HMM/DNN ASR in an equal data setting: A Finnish case study (submitted)

Jean Carrive, Abdelkrim Beloued, Pascale Goetschel, Serge Heiden, Antoine Laurent, Pasquale Lisena, Franck Mazuet, Sylvain Meignier, Bénédicte Pincemin, Géraldine Poels, Raphaël Troncy. Transdisciplinary Analysis of a Corpus of Fench Newsreels: The ANTRACT Project. Digital Humanities Quarterly. January 2021 Lisena, Pasquale; Troncy, Raphaël. Face Recognition in Videos Using Images from the Web. The Web Conference 2021, Demo Track (to appear)

Lisena, Pasquale; Troncy, Raphaël. FaceRec: A Complete Pipeline for Face Recognition in Video Archives. DataTV 2021 Workshop @ IMX 2021 (submitted)

#### 2020

Ismail Harrando, Alison Reboud, Pasquale Lisena, Raphaël Troncy, Jorma Laaksonen, Anja Virkkunen, Mikko Kurimo. Using Fan-Made Content, Subtitles and Face Recognition for Character-Centric Video Summarization, Proceedings of the TRECVID 2020 Workshop.

Matias Lindgren, Tommi Jauhiainen and Mikko Kurimo. Releasing a toolkit and comparing the performance of language embeddings across various spoken language identification datasets Proceedings of Interspeech 2020

Matias Lindgren. Deep learning for spoken language identification. Master's thesis, Aalto University, 2020.

Abhilash Jain, Aku Rouhe, Stig-Arne Grönroos, Mikko Kurimo. Finnish ASR with Deep Transformer Models Proceedings of Interspeech 2020.

Abhilash Jain. Finnish language modeling and ASR with Deep Transformer Models. Master's thesis, Aalto University, 2020.

Aku Rouhe, Tuomas Kaseva, and Mikko Kurimo. Speaker-aware training of attention-based end-to-end speech recognition using neural speaker embeddings. In Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), 2020.

Phuong Anh Nguyen, Jiaxin Wu, Chong-Wah Ngo, Danny Francis and Benoit Huet. VIREO @ Video browser showdown 2020. In 26th International Conference on MultiMedia Modeling (MMM 2020), 5-8 January 2020, Daejon, Korea.

Tzu-Jui Julius Wang, Selen Pehlivan and Jorma Laaksonen. Tackling the Unannotated: Scene Graph Generation with Bias-Reduced Models. In Proceeding of the British Machine Vision Conference (BMVC), Online Conference 7–10 September, 2020.

Jorma Laaksonen and Zixin Guo. PicSOM Experiments in TRECVID 2020. In Proceedings of the TRECVID 2020 Workshop. Online Conference 17–19 November, 2020.

#### <u>2019</u>

Rao Muhammad Anwer, Fahad Shahbaz Khan, Jorma Laaksonen and Nazar Zaki. Multi-stream convolutional networks for indoor scene recognition. In Proceedings of the 18th International Conference on Computer Analysis of Images and Patterns (CAIP2019), pages 196–208, Salerno, Italy, September 2019.

Tzu-Jui Julius Wang, Hamed Rezazadegan Tavakoli, Mats Sjöberg and Jorma Laaksonen. Geometryaware relational exemplar attention for dense captioning. In Proceedings of the 1st International Workshop on Multimodal Understanding and Learning for Embodied Applications (MULEA '19) in ACM Multimedia Conference, pages 3–11, Nice, France, October 2019.

Tiancai Wang, Rao Muhammad Anwer, Muhammad Haris Khan, Fahad Shahbaz Khan, Yanwei Pang, Ling Shao and Jorma Laaksonen. Deep contextual attention for human-object interaction detection. In

Proceedings of the International Conference on Computer Vision (ICCV2019), pages 5694–5702, Seoul, Korea, October 2019.

Héctor Laria Mantecón, Jorma Laaksonen, Danny Francis and Benoit Huet. PicSOM and EURECOM Experiments in TRECVID 2019. In Proceedings of the TRECVID 2019 Workshop. NIST, Gaithersburg, MA, USA, November 2019.

Jean Carrive. Using Artificial Intelligence to Preserve Audiovisual Archives: New Horizons, More Questions. In Proceedings of the 27th ACM International Conference on Multimedia, Conference proceedings, Pages 1–2, Nice, France, October 2019. Invited keynote.

David Doukhan, Géraldine Poels, Zohra Rezgui and Jean Carrive. Describing Gender Equality in French Audiovisual Streams with a Deep Learning Approach. VIEW Journal of European Television History and Culture, 7(14), pp.103. 2019.

Stefanos Vrochidis, Benoit Huet, Edward Y. Chang and Ioannis Kompatsiaris. Big data analytics for large-scale multimedia search. 2019. Wiley, ISBN: 978-1119376972

Danny Francis, Phuong Anh Nguyenn, Benoit Huet and Chong-Wah Ngo. Fusion of multimodal embeddings for ad-hoc video search. In 1st International Workshop on Video Retrieval Methods and Their Limits (ViRaL 2019), co-located with ICCV 2019, Seoul, Korea, October 2019.

Danny Francis, Benoit Huet. L-STAP: Learned Spatio-Temporal Adaptive Pooling for video captioning. In 1st International Workshop on AI for smart TV content production, access and delivery (AI4TV 2019), co-located with the 27th ACM International Conference on Multimedia, October 2019, Nice, France

Danny Francis, Phuong Anh Nguyen, Benoit Huet and Chong-Wah Ngo. EURECOM at TRECVid AVS 2019. In Proceedings of the TRECVID 2019 Workshop. NIST, Gaithersburg, MA, USA, November 2019.

Phuong Anh Nguyen, Jiaxin Wu, Chong-Wah Ngo, Francis Danny and Benoit Huet. VIREO-EURECOM @ TRECVID 2019: Ad-hoc Video Search (AVS). In Proceedings of the TRECVID 2019 Workshop. NIST, Gaithersburg, MA, USA, November 2019.

Tuomas Kaseva, Aku Rouhe, and Mikko Kurimo. Spherediar – an efficient speaker diarization system for meeting data. In 2019 IEEE Automatic Speech Recognition and Understanding Workshop (ASRU), 2019.

Arturs Polis. Paragraph-length image captioning using hierarchical recurrent neural networks. Master's Thesis, University of Helsinki, 2019.

Héctor Laria Mantecón. Deep Reinforcement Sequence Learning for Visual Captioning. Master's Thesis, Aalto University, 2019.

Aditya Surikuchi: Visual Storytelling: Captioning of Image Sequences. Master's Thesis, Aalto University, 2019.

Tuomas Kaseva. Spherediar – an efficient speaker diarization system for meeting data. Master's thesis, Aalto University, 2019.

Zohra Rezgui. Détection et classification de visages pour la description de l'égalité femme-homme dans les archives télévisuelles, INA, 2019.

Danny Francis. Semantic representations of images and videos. PhD Thesis, Sorbonne University/EURECOM. December 2019.

Peter Smit. Modern subword-based models for automatic speech recognition. PhD Thesis. Aalto University. 2019.

#### 2018

Danny Francis, Benoit Huet and Bernard Merialdo. EURECOM participation in TrecVid VTT 2018. In 22nd International Workshop on Video Retrieval Evaluation (TRECVID 2018), Gaithersburg, USA, November 13-15, 2018.

Mats Sjöberg, Hamed R. Tavakoli, Zhicun Xu, Hector Laria Mantecon and Jorma Laaksonen. PicSOM experiments in TRECVID 2018. In 22nd International Workshop on Video Retrieval Evaluation (TRECVID 2018), Gaithersburg, USA, November 13-15, 2018.

David Doukhan, Eliott Lechapt, Marc Evrard and Jean Carrive. INA's MIREX 2018 music and speech detection system. In 14th Music Information Retrieval Evaluation eXchange (MIREX), September 2018, Paris, France.

Zhicun Xu, Peter Smit, and Mikko Kurimo. The Aalto system based on fine-tuned audioset features for DCASE2018 task2 – general purpose audio tagging. In Detection and Classification of Acoustic Scenes and Events Workshop (DCASE 2018), Surrey, UK, November 2018.

Zhicun Xu. Audio Event Classification Using Deep Learning Methods. Master's thesis. Aalto University, 2018.

Olfa Ben-Ahmed and Benoit Huet. Deep Multimodal Features for Movie Genre and Interestingness Prediction. In International Conference on Content-Based Multimedia Indexing (CBMI 2018), La Rochelle, France, 4-6 September 2018. (PDF

#### 3.2.2 WP3 MEDIA ENRICHMENT AND HYPERLINKING

2021

Dejan Porjazovski, Juho Leinonen and Mikko Kurimo. Attention-Based End-To-End Named Entity Recognition from Speech (submitted).

Lisena, Pasquale; Harrando, Ismail; Troncy, Raphaël. Watch Your Model: A Systematic Evaluation of Topic Models. ACL 2021 (submitted)

Harrando, Ismail; Troncy, Raphaël. Named Entity Recognition as Graph Classification. ESWC 2021 Poster Track (submitted)

Harrando, Ismail; Troncy, Raphaël. GraphNER: Named Entity Recognition as Graph Classification. ISWC 2021 (submitted)

Ehrhart Thibault; Lisena, Pasquale; Troncy, Raphaël. KG Explorer: a Customisable Exploration Tool for Knowledge Graphs. SEMANTICS 2021 (submitted)

Harrando, Ismail; Troncy, Raphaël. TV Content Segmentation and Alignment. DataTV 2021 Workshop @ IMX 2021 (submitted)

Harrando, Ismail; Troncy, Raphaël. Explainable Zero-Shot Topic Extraction Using a Common-Sense Knowledge Graph. LDK 2021 (submitted)

2020

Dejan Porjazovski, Juho Leinonen, and Mikko Kurimo. Named entity recognition for spoken Finnish. Proceedings of 2nd International Workshop on AI for Smart TV Content Production Access and Delivery. Online Dejan Porjazovski. End-to-end named entity recognition for spoken Finnish. Master's thesis, Aalto University, 2020.

Lisena, Pasquale; Harrando, Ismail; Kandakji, Oussama; Troncy, Raphaël. ToModAPI: A topic modeling API to train, use and compare topic models. In NLP-OSS @ EMNLP 2020. Online

Reboud, Alison; Harrando, Ismail; Laaksonen, Jorma; Troncy, Raphaël. Predicting media memorability with audio, video, and text representations. In MediaEval 2020. Online

#### 2019

Mohammad Reza Kavoosifar, Daniele Apiletti, Elena Baralis, Paolo Garza and Benoit Huet. Effective video hyperlinking by means of enriched feature sets and monomodal query combinations. International Journal of Multimedia Information Retrieval, 2019

Lorenzo Canale, Pasquale Lisena and Raphaël Troncy. Une nouvelle méthode ensembliste pour la reconnaissance et la désambiguïsation d'entités nommées en utilisant des réseaux de neurones. In Journées francophones d'Ingénierie des Connaissances (IC 2019), July 2019, Toulouse, France

Pasquale Lisena, Albert Meroño-Peñuela, Tobias Kuhn and Raphaël Troncy. Easy web API development with SPARQL transformer. In 18th International Semantic Web Conference (ISWC 2019), In-use Track, October 2019, Auckland, New Zealand

Raphaël Troncy. HyperTED: Exploring video lectures at the fragment levels for enhancing learning. In SALMM @ACM Multimedia 2019, October 2019, Nice, France

Reboud, Alison; Harrando, Ismail; Laaksonen, Jorma; Francis, Danny; Troncy, Raphaël; Mantecon, Hector Laria. Combining textual and visual modeling for predicting media memorability. In MediaEval 2019. Nice, France.

#### <u>2018</u>

Julien Plu, Giuseppe Rizzo and Raphaël Troncy. ADEL: ADaptable Entity Linking. A Hybrid Approach to Link Entities with Linked Data for Information Extraction. In Semantic Web Journal, IOS Press, 2018.

Lorenzo Canale, Pasquale Lisena and Raphaël Troncy. A Novel Ensemble Method for Named Entity Recognition and Disambiguation based on Neural Network. In International Semantic Web Conference (ISWC 2018), Monterey, CA, USA, 8-12 October 2018.

#### 3.2.3 WP4 MULTIMODAL MACHINE TRANSLATION

<u>2021</u>

Grönroos, Stig-Arne; Virpioja, Sami; Kurimo, Mikko; Transfer learning and subword sampling for asymmetric-resource one-to-many neural translation MACHINE TRANSLATION, 2021.

#### 2020

Mary Nurminen and Maarit Koponen. 2020. Machine Translation and Fair Access to Information. Translation Spaces 9(1), pages 150–169.

Jörg Tiedemann. The Tatoeba Translation Challenge – Realistic Data Sets for Low Resource and Multilingual MT. In Proceedings of the 5th Conference on Machine Translation (WMT 2020), pages 1174–1182. Online Conference 19–20 November, 2020.

Jörg Tiedemann, Santhosh Thottingal. OPUS-MT – Building open translation services for the World. In Proceedings of the 22nd Annual Conference of the European Association for Machine Translation (EAMT 2020), pages 479–480. Online Conference 3–5 November, 2020.

Maarit Koponen, Umut Sulubacak, Kaisa Vitikainen, Jörg Tiedemann. MT for subtitling: User evaluation of post-editing productivity. In Proceedings of the 22nd Annual Conference of the European Association for Machine Translation (EAMT 2020), pages 115–124. Online Conference 3–5 November, 2020.

Maarit Koponen, Umut Sulubacak, Kaisa Vitikainen, Jörg Tiedemann. MT for Subtitling: Investigating professional translators' user experience and feedback. In Proceedings of the 14th Conference of the Association for Machine Translation in the Americas October 6 – 9, 2020, 1st Workshop on Post-Editing in Modern-Day Translation, pages 79–92. Online, 6 October, 2020.

Umut Sulubacak, Ozan Caglayan, Stig-Arne Grönroos, Aku Rouhe, Desmond Elliott, Lucia Specia, Jörg Tiedemann. Multimodal Machine Translation through Visuals and Speech. In Machine Translation, vol. 34, issue 2–3, pages 97–147. Springer, 13 August, 2020.

Raúl Vázquez, Mikko Aulamo, Umut Sulubacak, Jörg Tiedemann. The University of Helsinki Submission to the IWSLT2020 Offline Speech Translation Task. In Proceedings of the 17th International Conference on Spoken Language Translation (IWSLT), pages 95–102. Stroudsburg, PA, 9 July, 2020.

Mikko Aulamo, Umut Sulubacak, Sami Virpioja, Jörg Tiedemann. OpusTools and Parallel Corpus Diagnostics. In Proceedings of the 12th Language Resources and Evaluation Conference, pages 3782– 3789. ELRA, Marseilles, France, 17 May, 2020.

Stig-Arne Grönroos, Sami Virpioja, Mikko Kurimo. Morfessor EM+Prune: Improved subword segmentation with expectation maximization and pruning. In Proceedings of the 12th Language Resources and Evaluation Conference, pages 3944–3953. ELRA, Marseilles, France, 17 May, 2020.

Stig-Arne Grönroos. Machine translation into morphologically rich low-resource languages. PhD thesis. Aalto University, 2020.

#### 2019

Aarne Talman, Umut Sulubacak, Raúl Vázquez, Yves Scherrer, Sami Virpioja, Alessandro Raganato, Arvi Hurskainen and Jörg Tiedemann. The University of Helsinki submissions to the WMT19 news translation task. In Proceedings of the Fourth Conference on Machine Translation (WMT): Shared Task Papers. 2019.

Raúl Vázquez, Umut Sulubacak and Jörg Tiedemann. The University of Helsinki submission to the WMT19 parallel corpus filtering task. In Proceedings of the Fourth Conference on Machine Translation (WMT): Shared Task Papers. 2019.

#### 2018

Umut Sulubacak, Aku Rouhe, Jörg Tiedemann, Stig-Arne Grönroos and Mikko Kurimo. The MeMAD Submission to the IWSLT 2018 Speech Translation Task. In 15th International Workshop on Spoken Language Translation (IWSLT 2018); Bruges, Belgium. pp. 89–94.

Stig-Arne Grönroos, Benoit Huet, Mikko Kurimo, Jorma Laaksonen, Bernard Merialdo, Phu Pham, Mats Sjöberg, Umut Sulubacak, Jörg Tiedemann, Raphaël Troncy and Raul Vázquez. 2018. The MeMAD Submission to the WMT18 Multimodal Translation Task. In 3rd Conference on Machine Translation (WMT 2018); Brussels, Belgium. Association for Computational Linguistics, pp. 609–617. arXiv:1808.10802 [cs]. ArXiv: 1808.10802.

Stig-Arne Grönroos, Sami Virpioja and Mikko Kurimo. Cognate-aware morphological segmentation for multilingual neural translation. In 3rd Conference on Machine Translation (WMT 2018); Brussels, Belgium. Association for Computational Linguistics, pp. 390–397.

Franck Burlot, Yves Scherrer, Vinit Ravishankar, Ondřej Bojar, Stig-Arne Grönroos, Maarit Koponen, Tommi Nieminen and François Yvon. The WMT18 Morpheval test suites for English–Czech, English– German, English–Finnish and Turkish–English. In 3rd Conference on Machine Translation (WMT18); Brussels, Belgium. Association for Computational Linguistics, pp. 550–564.

## 3.2.4 WP5 COMBINING AUTOMATIC HUMAN EFFICIENCY WITH HUMAN ACCURACY

#### 2021

Kim Starr, Sabine Braun and Jaleh Delfani (2021) 'A Sentient Being's Guide to Automatic Video Description: a six-point Roadmap for Building the Computer Model of the Future', in Proceedings of the Media for All 9 Conference, Barcelona [Virtual], 27-29th January. [Video presentation publication forthcoming.]

Sabine Braun, Kim Starr and Jaleh Delfani (2021) 'When worlds collide: AI-created, human-mediated video description services and the user experience'. UAHCI Conference, Washington DC/online, July 24-29. [Accepted].

#### 2020

Kim Starr, Sabine Braun and Jaleh Delfani (2020) 'Taking a Cue from the Human: Linguistic and Visual Prompts for the Automatic Sequencing of Multimodal Narrative'. Journal of Audiovisual Translation, 3(2), pp: 140–169. Available at: https://www.jatjournal.org/index.php/jat/article/view/138.

Sabine Braun and Kim Starr (2020/21) Innovation in Audio Description Research. London: Routledge. For further information: https://www.routledge.com/Innovation-in-Audio-Description-Research/Braun-Starr/p/book/9781138356672.

Sabine Braun and Kim Starr (2020/21) 'Comparing human and automated approaches to visual storytelling', in Braun, S. and Starr, K. (eds) Innovation in Audio Description Research. London: Routledge.

Sabine Braun and Kim Starr (2020) 'Byte-Sized Storytelling: Training the Machine to See the Bigger Picture'. 13th Languages and the Media, Berlin, December 14-16th (accepted). Conference postponed until September 2021.

## 2019

Sabine Braun and Kim Starr (2019) 'Mind the Gap: An Investigation of Omissions in Audio Description', ARSAD, Barcelona.

Sabine Braun and Kim Starr (2019) 'Finding the Right Words: Investigating Machine-Generated Video Description Quality using a Human-Derived Corpus-based Approach'. Journal of Audiovisual Translation, 2(2), pp. 11–35.

Sabine Braun and Kim Starr (2019) 'Comparing human and automated approaches to video description'. Media for All 8, Stockholm, 19th June.

2018

Sabine Braun and Kim Starr (2018) 'From Slicing Bananas to Pluto the Dog: Human and Automatic Approaches to Visual Storytelling', Languages & the Media, Berlin, 10/2018.

## 3.2.5 WP6 COMBINING AUTOMATIC HUMAN EFFICIENCY WITH HUMAN ACCURACY

2020

Lauri Saarikoski, Dieter Van Rijsselbergen, Maija Hirvonen, Maarit Koponen, Umut Sulubacak, Kaisa Vitikainen. MeMAD project: End user feedback on AI in the media production workflows. In Proceedings of the International Broadcasting Convention (IBC) 2020.

Maarit Koponen, Tiina Tuominen, Maija Hirvonen, Kaisa Vitikainen, and Liisa Tiittula. 2020. User perspectives on developing technology-assisted access services in public broadcasting. Bridge: Trends and Traditions in Translation and Interpreting Studies 1(2), 47-67.

#### 3.2.6 Other publications that acknowledge or reference the MeMAD project

Maija Hirvonen, Tuija Kinnunen (eds.). Saavutettava viestintä: Yhteiskunnallista yhdenvertaisuutta edistämässä. Helsinki: Gaudeamus.

Maija Hirvonen, Liisa Tiittula. Näetkö saman minkä minä kuulen? Audiovisuaalisen viestinnän saavutettavuus ohjelmatekstityksen ja kuvailutulkkauksen avulla. In: M. Hirvonen & T. Kinnunen, *Saavutettava viestintä: Yhteiskunnallista yhdenvertaisuutta etsimässä.* Helsinki: Gaudeamus, pp. 73-108.

## **3.3 Events, Seminars, Conferences and Webinars**

The tables below contain conferences, seminars, and other types of events where the MeMAD project has been disseminated.

Date	Partner	Subject	Туре	Venue
2.2.2018	Yle	Audi-o-vi-su-al collec-tions – turning sound and vision into data	Conference / invited talk	National Library of Sweden (Stockholm)
13.3.2018	Helsinki	Translation as interactive meaning constitution and negotiation	Invited talk	University of Vienna, Centre for Translation Studies
3.5.2018	Helsinki	University of Helsinki - Language technology research seminar	University-internal research seminar	University of Helsinki
26.11.2018	Helsinki	University of Helsinki - Translation studies research seminar	University-internal research seminar	University of Helsinki
14.5.2018	Helsinki	Nuorten tiedeakatemian klubi (Club meetings of the Young Academy Finland)	Invited talk	Finnish Academy of Science and Letters (Helsinki, Finland)
17.5.2018	Lingsoft	Translating Europe Workshop "Audiovisual translation – new trends in translation technology"	Invited talk	Tallinn University

21.5.2018	Lingsoft	Digitality and logic of Internet	Exhibition	University of Turku
28.5.2018	Yle	Nordic Broadcasting Archives annual meeting	seminar	Yle (Helsinki, Finland)
25.6.18	Surrey	TECHNE Congress (UK Research & Innovation/AHRC) - Presentation and Panel	conference/ invited talk	TECHNE/UKRI/ University of Roehampton (London, UK)
5.6.2018	Yle	EBU Metadata Developer's Network 2018	conference	European Broadcasting Union (Geneva)
8.10.2018	INA	Visual studies et Méditerranée – Regarder/Archiver la guerre : 8 octobre 2018 (https://imageson.hypotheses.org/ 2811)	Conference	Aix-en-Provence (France)
31.10- 1.11.2018	Aalto & Helsinki	Third Conference on Machine Translation (WMT18)	Conference	Association for Computational Linguistics (Brussels)
29.10- 30.10.2018	Helsinki	15th International Workshop on Spoken Language Translation (IWSLT 2018)	Workshop	Bruges
3.10 - 5.10. 2018	Surrey	Languages and The Media http://www.languages- media.com/index.php	Conference	ICWE (Berlin)
13.11 15.11.2018	Aalto	TRECVID 2018	Workshop	NIST (Gaithersburg, MD, USA)
Nov 2018.	Aalto	Detection and Classification of Acoustic Scenes and Events Workshop (DCASE 2018)	Workshop	Surrey, UK
19.1.2018	Aalto	MeMAD open kick-off seminar	Seminar	MeMAD (Helsinki)
5.2.2018	Aalto	Future of speech technology	Meeting	The ministry of traffic and communication of Finland (Helsinki)
18.6.2018	Aalto	Visiting lecture	Visiting lecture	Saarland University (Saarbrucken, Germany)
26.10.2018	Aalto	Public Liisa Tiittula seminar for translation studies	seminar	University of Helsinki
30.11.2018	Aalto	Intralingual subtitles for hard of hearing and other users	seminar	Aalto & Helsinki
12.12.2018	Aalto	AIDay	seminar	Aalto & Helsinki (Dipoli, Espoo)
17.12.2018	Aalto	Visiting lecture	Visiting lecture	University of Eastern Finland (Joensuu

Table 3: MeMAD dissemination events for 2018.

Date	Partner	Subject	Туре	Venue
31.1.2019	Limecraft	EBU Production Technology Seminar	Conference	National Library of Sweden (Stockholm)
8.2.2019	Limecraft	Open Forum	Conference	University of Antwerp and Medianet Vlaanderen
27.2.2019		"The business of AI webinar series"; session on "Language (Technology) is the key to (Artificial) Intelligence"	on-line webinar	
11.3.2019	Aalto & Helsinki	Machine Learning Coffee Seminar	seminar series	Helsinki
19.3 - 20.3 2019	Surrey	ARSAD 2019	Conference	UAB, Barcelona
7.4.2019	Limecraft	NAB Show - National Association of Broadcasters	Trade show	Las Vegas
6.5.2019	Aalto & Helsinki	FCAI (Finnish Centre of Artificial Intelligence) research seminar for NLP	seminar	Espoo, Finland
11-13.6 2019	Limecraft	EBU - Metadata Developer Network	Industry workshop	Geneva
11 - 13.6.2019	EURECOM Yle	EBU Metadata Developers Network (MDN) workshop	Industry workshop	Geneva
17 - 19.6.2019	Surrey Lingsoft	Media for All 8 https://www.tolk.su.se/e nglish/about- us/events/conferences/ media-for-all-8	Conference	University of Stockholm
1.8 - 2.8 2019	Helsinki	Fourth Conference on Machine Translation (WMT19)	Conference	ACL, Florence
4.9.2019	Aalto	The 18th International Conference on Computer Analysis of Images and Patterns	Conference	Salerno
13.9 - 17.9.2019	Limecraft	International Broadcasters Convention (IBC) Exhibition 2019	Trade Show	Amsterdam
30.9 - 2.10. 2019	Lingsoft Helsinki	Nodalida conference	North European NLP conference	University of Turku, Finland
1.10.2019	Helsinki	Translation Studies research seminar	invited talk/seminar	Linnaeus University, Växjö, Sweden

2 10 2010	Aalta	Computer Science	Sominar	Holeinki
5.10.2019	Adito	Tesearch day at Aalto	Seminar	
18.10 - 19.10 2019	Limecraft	ELG EuroForum 2019	Conference / Project Kickoff	Brussels
21.10.2019	Aalto, EURECOM	1st AI4TV workshop in ACM Multimedia - conference	Workshop	Nice
23.10 2019	Helsinki	Huawei Workshop on Cloud Computing and Data Security - presentation on "Opportunities and Challenges in Natural Language Understanding - in a Multilingual Setup"	Workshop	Helsinki
23.10.2019	Lingsoft	Kites symposium 2019	Invited talk	Helsinki
2425.10.2019	Limecraft	LT-Innovate Industry Summit 2019	Conference	Brussels
2425.10.2019	Yle	Nordic Archive and Research Conference	Conference	Helsinki
25.10.2019	Aalto	1st International Workshop on Multimodal Understanding and Learning for Embodied Applications in ACM Multimedia	Workshop	Nice
30.10.2019	Aalto	International Conference on Computer Vision	Conference	Seoul
3.11.2019	Helsinki	Fourth Workshop on Discourse in Machine Translation (DiscoMT 2019)	Workshop	ACL, Hong Kong
7.11.2019	Helsinki	HELDIG Summit - presentation on "Learning to understand languages with neural networks"	Workshop	University of Helsinki
13.11.2019	Aalto	TRECVID 2019	Workshop	Gaithersburgh
26.11 2019	Helsinki	AI Day (Espoo, Finland) - presentation on "Language (Technology) is the key to (Artificial) Intelligence"	Workshop	FCAI, Espoo
03.12.2019	EURECOM	SemWebPro 2019	Workshop	Paris, France

		"Art, Copyright and the Transformation of Authorship" seminar "Kun kone kääntää, kuka on tekijä? (When a machine translates, who is the		
16.12.2019	Helsinki	author?)"	Seminar	University of Helsinki

Table 4: MeMAD dissemination events for 2019.

Date	Partner	Subject	Туре	Venue
16.1.2020	Helsinki	The Night of Science panel discussion "Artificial Intelligence, Machine Translations and Cultural Diversity"	Seminar/panel discussion	Helsinki
17.1.2020	Helsinki	CSC:n Science Seminar	seminar	CSC, Helsinki
23.1.2020	Helsinki	Colloquium of the Department of Language Science & Technology and SFB	seminar	University of Saarbrücken
27.1.2020	Aalto	MoMAF project kick-off	seminar	Helsinki
31.1.2020	Helsinki	Translating Europe seminar "Machine translation and the human translator" - presentation on "MT as a support for subtitling"	Workshop	Tampere, Finland
26.2.2020	Surrey	Research England, Expanding for Excellence	Conference	Birmingham, UK
3.3.2020	Aalto	Interactive AI, FCAI focus area seminar	seminar	Espoo, Finland
11.5.2020	Helsinki	Building and using comparable corpora	workshop	online
9.6 - 10.6.2020	Yle Limecraft	EBU Metadata Developers Network (MDN) workshop: "Metadata Processing in the H2020 MeMAD platform"	Conference + Demo	online
26.8.2020	Aalto	Språkteknologi för små språk i Norden (Nordiska ministerrådet)	seminar	online
4.9.2020	Limecraft	UK Digital Production Partnership: Innovation Week 2020	seminar	online

7.9.2020	Yle	EBU MIM-AI monthly workshop	workshop	online
7.9.2020	Aalto	Aurora AI meet-up with FCAI	seminar	Helsinki, Finland
8-11.9.2020	Limecraft	IBC 2020 Showcase event of IBC Accelerator program - with AP, Vidrovr, Metaliquid.	seminar	Online
14.9.2020	Yle EURECOM	DataTV2020 Webinar 14.9.2020	workshop	online (ReTV & MeMAD)
22.9.2020	Helsinki	brAln seminar (organised by Helsinki)	seminar/workshop	Online
24.9.2020	Helsinki	Suomalais-ruotsalainen kääntäjäseminaari (Finnish-Swedish Translators' Seminar)	seminar	online
29.9.2020	Aalto Helsinki	Seminar on next- generation data-efficient deep learning (FCAI)	seminar	Online
6.10.2020	Helsinki	AMTA 2020 The 14th biennial conference of the Association for Machine Translation in the Americas, workshop on Post-Editing in Modern-Day Translation	workshop	online
12.10.2020	EURECOM Aalto	2nd Al4TV workshop in ACM Multimedia - conference	workshop	online
13.10.2020	Helsinki	KITES symposium (panel MT in professional translation and invited talk on OPUS-MT)	conference/worksh	Online
3.11 -5.11.2020	Helsinki	EAMT 2020 The 22nd Annual Conference of the European Association for Machine Translation	conference	online
6.11.2020	Aalto	CSC:n Science Seminar	seminar series	Online
6.11.2020	Aalto	HUAWEI Helsinki Cloud Service Summit	Conference	Online
25.11.2020	Helsinki	University of Jyväskylä English guest seminar: "Multilingual accessibility and audiovisual media: Can technology help with crossing language	seminar/invited talk	online

		barriers?"		
26.10.2020	Yle Limecraft	IASA & FIAT/IFTA joint conference 2020 - "Where to apply AI? Measuring the value of automated metadata and machine translations in professional media archive use"	Conference	Online
3.12.2020	Limecraft	ELG Meta Forum 2020 - demonstration of the MeMAD prototype between presentation sessions.	seminar	online
3.12.2020	Limecraft	BigScore pitch event	pitch event	online
9.12.2020	Aalto	TRECVID 2020(NIST)	workshop	online
10.12.2020	Helsinki	Business data forum	conference	online
11.12.2020	Helsinki	HELDIG Summit	workshop	online
14.12 - 16.12.2020	Surrey	Language and the Media	Conference	online
15.12.2020	Yle Helsinki	Roundtable discussion "Machine translation in subtitle translator's work" (Konekääntäminen käännöstekstittäjän työssä)	seminar	online
15.12.2020	Helsinki Aalto Lingsoft	ELRC workshop (keynote by Helsinki) (ELRC/FIN-CLARIN)	workshop	online

Table 5: MeMAD dissemination events for 2020.

Date	Partner	Subject	Туре	Venue
14.1.2021	Yle Lingsoft Aalto Helsinki	Panel discussion "Making Media Accessible – Developing tools for audio- visual data in the MeMad- project", organised together by MeMAD and Goethe- Institut for Night of Science	Conference	online

27.1 - 29.1.2021	Surrey Helsinki	Media for All 9	Conference / invited talk	online
28.1.2021	Yle Limecraft	EBU Production Technology Seminar (PTS) 2021 - "AI in Media Production – Findings from MeMAD"	Conference	online
19.1.2021	Aalto Lingsoft Yle	MeMAD Webinar: Making Content Available for All: An Accessibility Perspective	seminar	online
26.1.2021	Aalto EURECOM Helsinki Lingsoft Surrey	MeMAD Webinar: Human- driven Al Solutions to Access and Manage Audiovisual Content: A Research Perspective	seminar	online
2.2.2021	Limecraft Lingsoft	MeMAD Webinar: Industrialising Media Production: A Producer's Perspective	seminar	online
9.2.2021	Limecraft	MME (Media Motor Europe) pitch event	pitch event	online
11.3.2021	Aalto	Opportunities and Challenges for People with Disabilities on the Web: discussion on Act on the Provision of Digital Services, W3C WCAG 2.1 AA level and digital accessibility (organised by Aalto)	collaborative discussion	online
12-16.4.2021	Limecraft	UK Digital Production Partnership - Innovation week 2021 (pitch event)	pitch event	online
19.4.2021	EURECOM	SWApi Tutorial @ TheWebConference 2021	Conference	online
19-23.4.2021	Limecraft	30th MINDS News Technology Network Conference 2021	Conference	online
6-10.6.2021	EURECOM	SWApi Tutorial @ ESWC 2021	Conference	online
21-23.6.2021	Limecraft	2nd International Workshop on Data-driven Personalisation of Television (DataTV-2021): "Al in Media Production - What works now, and which challenges still need solving", keynote talk.	conference	online

Aalt	3rd AI4TV workshop ACM Multimedia - conference to workshop	in 3 <sup>rd</sup> AI4TV workshop in ACM Multimedia -conference workshop	
2024.10.201 EU	RECOM		online

Table 6: MeMAD dissemination events for 2021.

#### 3.3.1. Webinar series

In lieu of a more traditional end event, the consortium arranged three webinars in January and February 2021, presenting the project results from three target audience perspectives:

- Making Content Available for All: An Accessibility Perspective
- Human-driven AI Solutions to Access and Manage Audiovisual Content: A Research Perspective
- Industrialising Media Production: A Producer's Perspective

The webinars were recorded and subsequently added to MeMAD's Youtube channel and the website.

## 3.4 Social media activity

The MeMAD project has a Twitter account and a LinkedIn account, through which project information is disseminated. Project participants also promote the project through their personal and professional social media accounts.

Twitter: @memadproject 206 followers LinkedIn: linkedin.com/company/memad-project/ 1593 impressions

So as to drive traffic to the website, we opted to retain the social media accounts of the project, but deemphasised them and primarily used them as automated reposters of website content and other discussion and use them to drive traffic to the website.

Dissemination of the project results also took place through user evaluations, carried out in Work Package 6, further described in D6.6. A landing page on the MeMAD website, coupled with Google Forms, where used in a viewer survey on machine-translated subtitles, https://memad.eu/survey-2020/

# 3.5 GitHub

The MeMAD project has a joint GitHub repository collection, located at <u>https://github.com/MeMAD-project</u>, containing several underlying repositories.

The underlying repositories and collections include:

- Models and scripts related to MeMAD automatic cross-lingual retrieval experiments. <u>https://github.com/MeMAD-project/cross-lingual-retrieval</u>
- MeMAD participation in the MediaEval Media Memorability 2019 and 2020 <u>https://github.com/MeMAD-project/media-memorability</u>

- MeMAD automatic cross-lingual content retrieval experiments (models and scripts) <u>https://github.com/MeMAD-project/cross-lingual-retrieval</u>
- MEMAD Explorer, The MeMAD Exploratory Search Engine powered by the MeMAD Knowledge Graph https://github.com/MeMAD-project/explorer
- MeMAD Knowledge Graph API
   <u>https://github.com/MeMAD-project/api</u>
- MeMAD subtitle translation pipeline <a href="https://github.com/MeMAD-project/subtitle-translation">https://github.com/MeMAD-project/subtitle-translation</a>
- MeMAD end-to-end speech translation system <u>https://github.com/MeMAD-project/speech-translation</u>
- MeMAD document-level machine translation system <u>https://github.com/MeMAD-project/doclevel-translation</u>
- MeMAD image caption translation system <u>https://github.com/MeMAD-project/image-caption-translation</u>
- Scripts for processing video subtitles <u>https://github.com/MeMAD-project/subalign</u>
- OPUS-MT
  - Fiskmö MT Engine and CAT plugins (fork) OPUS-CAT is a collection of software which make it possible to OPUS-MT neural machine translation models in professional translation. OPUS-CAT includes a local offline MT engine and a collection of CAT tool plugins. https://github.com/MeMAD-project/OPUS-CAT
  - Opus-MT (fork) Open neural machine translation models and web services <u>https://github.com/MeMAD-project/Opus-MT</u>
  - OPUS-MT-eval (fork) benchmarks for evaluating MT models <u>https://github.com/MeMAD-project/OPUS-MT-eval</u>
  - Train Opus-MT models (fork) <u>https://github.com/MeMAD-project/OPUS-MT-train</u>
  - OPUS-translator (fork) online translation demonstrator <u>https://github.com/MeMAD-project/OPUS-translator</u>
  - OpusTools-perl <u>https://github.com/MeMAD-project/OpusTools-perl</u>
  - OpusTools <u>https://github.com/MeMAD-project/OpusTools</u>
- The Tatoeba Translation Challenge (fork), a challenge set for machine translation covering over 500 languages and thousands of language pairs. <u>https://github.com/MeMAD-project/Tatoeba-Challenge</u>
- MeMAD Metadata Interchange Formats <a href="https://github.com/MeMAD-project/interchange-formats">https://github.com/MeMAD-project/interchange-formats</a>
- mmca (MeMAD multimodal content analysis: collection of tools and libraries) <u>https://github.com/MeMAD-project/mmca</u>

Collection linking to the following repositories:

- AudioTagger <u>https://github.com/ZhicunXu/AudioTagger/tree/25ebd4583d0ed4dbc05bd0ee638139b500</u> <u>b4ffc0</u>
- DeepCaption <u>https://github.com/aalto-</u> cbir/DeepCaption/tree/09537daeac4b394ead90a8af5326de0b6e1fecf4
- EUR-FaceRec (Eurecom's face detection and recognition tools) <u>https://github.com/MeMAD-project/EUR-FaceRec</u>
- OpenNMT-py <u>https://github.com/Waino/OpenNMT-</u> py/tree/cd21102352658df0062680c8b94935b1f5d6c539
- PicSOM <u>https://github.com/aalto-</u> cbir/PicSOM/tree/a448a16f18cc7567a19071b9cfd767c5d98f94e6
- SphereDiar https://github.com/Livefull/SphereDiar/tree/222b111e609bfab0601a72a12412143c3064d b67
- asr-finnish <u>https://github.com/psmit/char-fin-</u> 2017/tree/7b8711456c2c6c3cf7d1711ce96b9d18686382ff
- avsr <u>https://github.com/aalto-</u> speech/avsr/tree/fdb509259d6ce99f7fe09b3c2e59002947deb63a
- espnet-old-speaker-aware <u>https://github.com/Gastron/espnet-old-speaker-aware/tree/31e4f49da9ffe5a2219abd79832e78035595e580</u>
- inaSpeechSegmenter <u>https://github.com/ina-</u> foss/inaSpeechSegmenter/tree/43d9d31b79adbc8937b241c672d572e1332ae7f2
- rdf-converter https://github.com/MeMAD-project/rdf-converter
- statistical-tools https://github.com/MeMAD-project/statistical-tools
- visual-storytelling <u>https://github.com/aalto-cbir/visual-</u> storytelling/tree/dce17296493b969088b6f967e963cb3b23dc5f3e

## 3.6 Newsletters and Press Releases

Six newsletters and press releases were sent during the first half of 2018, all of which are available on the <u>MeMAD website</u>. In a subsequent version of the website, this page, the events page and the blog page will be merged into a single page, holding all blog post-type content, rather than having a set of pages with little information on them.

The newsletters and press releases were ultimately phased out altogether in favour of blog posts and using social media to drive traffic to the website.

The MeMAD webinar series (the final events of the project) used Eventbrite for ticket registration, for providing updates to the webinar agenda and for sending other information and reminders for the webinars.

# 3.7 Website Activity

The project website, <u>www.memad.eu</u>, uses Google analytics for traffic analytics. Below the statistics for 2018, 2019, 2020, and 2021, respectively.

Year	2018
Unique visitors	1950
Top countries of visitors	France 25%, Finland 21%, Germany 5%, UK 5%, Spain 3%, Belgium 2%, Netherlands 2%
Average number of pages per session	2.32
Most frequent entry points	Direct access (50%), Referrals (30% - the most frequent being Github and the University of Helsinki website), Search (11%), Social media (3%)
Bounce rate	60%

#### Table 7: Website statistics for the year 2018.

Year	2019
Unique visitors	2500
Top countries of visitors	Finland 25%, France 13, US 9%, UK 4%, Spain 3%
Average number of pages per session	2.10
Most frequent entry points	Direct access (65%), Search (24%) Referrals (7.1% - the most frequent being Github and the University of Helsinki website), Social media (3%)
Bounce rate	67%

Table 8: Website statistics for the year 2019.

Year	2020
Unique visitors	4900
Top countries of visitors	Finland 20%, US 17%, France 6%, UK 6%, India 5%
Average number of pages per session	2.32
Most frequent entry points	Direct access (73%), Search (17%), Referrals (6% - the most frequent being the website of ACM Multimedia Conference 2020), Social media (3%)

Bounce rate	78%
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Table 9: Website statistics for the year 2020.

Year	2021 (1.1 - 30.3)
Unique visitors	1700
Top countries of visitors	US 13%, Finland 11%, China 8%, India 5%, UK 4%, France 4%
Average number of pages per session	1.80
Most frequent entry points	Direct access (56%), Search (22%), E-mail (5%), Referrals (3%), Social media (2%)
Bounce rate	61%

#### Table 10: Website statistics for the first quarter of the year 2021.

While the number of visitors from year-to-year, the bounce rate also increased — a good bounce rate would be in the 26–40% range, and an average rate in the 40–55% region, the bounce rate for the website, as can be seen from the above tables, thus being far from satisfactory. Furthermore, despite the change in strategy when it comes to the use of social media in 2019 (that is, the use of social media to drive traffic to the MeMAD website), it remained a marginal source of website traffic throughout the project.

The most frequently visited pages of the website during the course of the project were as follows (blog posts are marked in bold, while event and conference pages are marked in italics):

Rank	Page	Page views	Avg. Time on Page (s)	Bounce Rate
1	/	9819	87,38	57,67 %
2	/about/	1572	57,85	76,58 %
3	/ai4tv2019/	1533	188,95	80,31 %
4	/blog/	1305	64,82	60,57 %
5	/ai4tv2020/	1111	268,67	83,80 %
6	/about/project-partners/	955	126,76	75,68 %
7	/2020/04/29/deep-learning-spoken-language- identification/	897	239,49	85,16 %

8	/publications/	800	119,75	81,41 %
9	/2019/08/14/speech-recognition-deaf-hard- hearing/	775	158,09	92,73 %
10	/contact/	633	41,96	88,35 %
11	/2019/01/16/tag-the-sound/	431	169,86	85,28 %
12	/survey-2020/	397	189,06	89,56 %
13	/deliverables/	375	86,80	77,38 %
14	/results/demos/	373	150,84	76,92 %
15	/webinars/	357	131,51	71,88 %
16	/press/	348	42,10	84,48 %
17	/about/memad-members/	294	172,67	80,52 %
18	/about/project-goals/	267	137,20	71,74 %
19	/2019/08/06/document-level-machine- translation/	266	141,77	93,03 %
20	/about/use-cases/	217	91,07	78,13 %
21	/news/	189	74,52	84,62 %
22	/events/	183	58,26	72,00 %
23	/2020/07/08/1000-freely-available-translation- models/	177	162,20	87,79 %
24	/presentations/	163	89,25	73,33 %
25	/2019/12/19/who-spoke-when/	159	205,93	85,32 %

26	/2020/02/17/automatically-generated-metadata- video-editing-searching/	152	195,76	81,52 %
27	/2019/10/01/analysing-1-million-hours-french- tv-radio-describing-gender-equality/	150	266,86	92,78 %
28	/webinars/production/	150	135,56	76,92 %
29	/2018/12/21/not-multimodal-mt/	135	174,75	88,31 %
30	/2018/12/13/sneak-peek-future-video- production/	119	77,94	80,30 %
31	/webinars/accessibility/	118	141,57	72,73 %
32	/2018/05/04/stakeholders-expressed-needs- memad-kick-off-really-liked-know-mikko- kurimo-looks-like/	116	116,05	83,87 %
33	/project-partners	106	114,76	0,00 %
34	/2018/04/04/lingsoft-artificial-intelligence- revolutionize-management-audiovisual- materials/	103	146,42	82,09 %
35	/webinars/research/	87	70,69	63,33 %
36	/2020/01/31/pilot-testing-mt-subtitles/	81	265,04	84,91 %
37	/press/newsletters/	79	109,00	68,75 %
38	/2018/11/12/unlocking-copyrighted-media- archives-for-research/	75	102,76	88,57 %
39	/2018/10/19/slicing-bananas-pluto-dog- computer-vision-human-touch/	73	174,50	97,50 %
40	/2019/09/05/havent-missed-cool-stuff-memad- github-repository/	71	180,87	60,00 %

 Table 11: The top 40 visited pages on the MeMAD website, for the duration of the project. Blog posts are marked in bold, and event pages are marked in italics.

## 3.7.1 Blog posts

In the original dissemination plan, the idea was to post at least one blog post a month. However, only five blog posts materialised over the first year of the project. To ensure more blog activity going forward, we instituted a blog schedule where each partner takes turns writing a blog post from May 2019 onward, with the initial months featuring multiple blog posts so as to meet the initial target frequency.

All told, 37 blog posts were produced during the course of the project. The intention is also to post additional blog posts following the conclusion of the project.

When	Торіс	Responsible Partner
January 2018	Welcome to the MeMAD Kick-off Seminar – Methods for managing audiovisual data: combining automatic efficiency with human accuracy	Lingsoft
May 2018	Stakeholders expressed their needs at MeMAD kick-off: "I would really have liked to know what Mikko Kurimo looks like."	Lingsoft
October 2018	2018 'From Slicing Bananas to Pluto the Dog': Computer Vision with a Human Touch	Surrey
November 2018	Unlocking copyrighted media archives for research	Yle
December 2018	MeMAD, a sneak-peek at the future video production	Yle
December 2018	To be or not to be multimodal in MT	Helsinki
January 2019	Tag the Sound	Aalto
February 2019	MeMAD use cases for validation at EBU MDN 2018	Yle
February 2019	MeMAD experiences on data licensing presented in Helsinki and Tallinn conferences October-November 2018	Yle
May 2019	You haven't missed all the cool stuff in the MeMAD GitHub repository, have you?	Lingsoft
June 2019	Working together to bring value	LLS
June 2019	MeMAD in Media for All conference	Lingsoft
August 2019	Speech recognition for the deaf and hard of hearing	Aalto
August 2019	Document-level Machine Translation	Helsinki
October 2019	MeMAD at MediaEval 2019 organized at EURECOM	EURECOM
October 2019	Automatic metadata high up in the mountains	Yle
October 2019	Analysing 1 million hours of French TV and radio for describing gender equality	INA
November 2019	Putting the user in the center	Lingsoft
December 2019	Who spoke and when? – Speaker diarization without speech recognition	Aalto
January 2020	Into the lion's den? Pilot testing machine translated subtitles with professional subtitlers	Helsinki
March 2020	The MeMAD knowledge Graph	EURECOM
March 2020	Automatically generated metadata in video editing and searching	YLE

April 2020	Putting it all together: towards multimodal solutions and their evaluation	LLS
April 2020	Deep learning for spoken language identification	Aalto
August 2020	Opening a New Chapter on Audio Description	Surrey
August 2020	MeMAD in the news – Maaseudun tulevaisuus published two articles on machine translation	LLS
July 2020	Huge contribution to the community – over 1000 freely available translation models	Helsinki
October 2020	Innovation Radar recognizes MeMAD project research	LLS
November 2020	MeMAD partners' pilot projects in European Language Grid	LLS
October 2020	Viewer perspectives on machine-translated subtitles	Yle
November 2020	Viewer perspectives on machine-translated subtitles – Part II	Yle
December 2020	End-to-end named entity recognition for spoken Finnish	Aalto
January 2021	Presenting the MeMAD project results – the MeMAD Webinars	LLS
January 2021	MeMAD featured at Yle's blog on accessibility	Yle
March 2021	UC2.1 and 2.2	Yle
March 2021	Recordings from the MeMAD webinars	Lingsoft
March 2021	MeMad: end of the project retrospective	Lingsoft

Table 12: MeMAD blog overview.

## 3.7.2 Event posts

In the initial version of the website, a page separate from the blog posts contains information on upcoming and held events featuring the MeMAD project and project partners. In a subsequent version of the website, this page, the news page and the blog page was merged into a single page, holding all blog-type content.

Furthermore, a separate landing page was created for the MeMAD Webinar series, which functioned as the substitute for an in-person final event in early 2021.

- September 5, 2018 MeMAD Project Present at IBC2018, <u>https://memad.eu/2018/09/05/memad-project-present-ibc2018/</u>
- May 18, 2018 Research Network DIGIN Interest about MeMAD, https://memad.eu/2018/05/18/research-network-digin-interested-memad/
- May 18, 2018 MeMAD Introduced in Tallinn, https://memad.eu/2018/05/18/400/
- January 13, 2018 Welcome to the MeMAD Kick-off Seminar Methods for Managing Audiovisual Data: Combining Automatic Efficiency with Human Accuracy, <u>https://memad.eu/2018/01/13/memad-kickoff-seminar/</u>
- The MeMAD Webinar series held in early 2021, and which functioned as the substitute for a final in-person event, and which presented the project results, <u>https://memad.eu/webinars/</u>

• The two editions (2019 and 2020 respectively) of the AI4TV workshops (jointly organised with the ReTV project) also had separate landing pages: <u>https://memad.eu/ai4tv2019/</u> and <u>https://memad.eu/ai4tv2020/</u>