

MDN WORKSHOP 2020, 9-10 JUNE, ONLINE

TUESDAY 9 JUNE

(08:45AM – 05:45PM CEST)

08:45 – 09:00	<p>INTRODUCTION</p> <p>Kim Viljanen – YLE and Tormod Værvågen</p>
09:00 – 9:30	<p>ABC PROGRAM DATASET - A PRACTICAL APPLICATION OF EBU CCDM, EBU MVC TR041 AND EIDR</p> <p><i>Presentation on an ABC data project the scope of which is to produce a minimum set of data identifying/describing all programs broadcast on ABC radio and television services since 1932. Of interest to MDN audience is the practical application of EBU CCDM, Media Value Chain (TR041) and EIDR data models/business rules to guide the extraction and transformation of data from multiple sources. The project is currently at POC stage extracting 'publication plan' and 'publication event' data from newspapers digitised by the National Library of Australia, and using this to produce a sample program data set for the 1960's.</i></p> <p>Lizbeth Moore, Trish Hoyne, Michael Easthope – Australian Broadcasting Corporation</p>
9:30 – 10:00	<p>INDEX POC: LESSONS LEARNED ABOUT INDEXES AND GRAPHDB</p> <p><i>Presentation about content Index PoC in Yle. This is a PoC that explored the possibilities of utilizing GraphDB and index to support content related information in Yle.</i></p> <ul style="list-style-type: none"> - Graph DB - Other index Use cases - Lessons learned <p>Samuli Pöntinen, YLE</p>
10:00 – 10:30	<p>ANALYSING POLITICAL DEBATES TO FEED DATA-JOURNALISTS</p> <p><i>AI (speech to text, NLP, face recognition) helps to create massive data, we have used such a workflow to allow the global analysis of 200 local political debates this Spring in France.</i></p> <p>Matthieu Parmentier, France TV</p>
10:30 – 10:45	<p><i>Break</i></p>
10:45 – 11:30 INCL. DEMO	<p>METADATA-DRIVEN TV CONTENT RE-PURPOSING AND RE-PUBLICATION</p> <p><i>ReTV project shows and explains its TV content re-purposing and re-publication tool, which uses prediction to suggest topics and events to focus a future TV/Web/social publication on, content from archives & broadcast to re-use and guides the creation of a publication at an optimal time to maximise the content's reach and engagement.</i></p> <p>Lyndon Nixon, MODUL Technology</p>
11:30 – 12:00	<p>DWERFT - LINKED METADATA FOR THE ENTIRE MEDIA VALUE CHAIN</p> <p><i>"DWERFT – Linked Metadata for Media" is a German research alliance for innovative media technologies. It follows the vision of collecting and providing linked metadata from the entire production chain for distribution of content through a semantically supported data structure. The presentation will give insights into vision, status quo and first user stories. (https://www.dwerft.de)</i></p> <p>Mark Guelbahar, IRT</p>
12:00 – 13:00	<p><i>Lunch</i></p>
13:00 – 13:30	<p>REALIZING A SMART DATA PLATFORM FOR SERVICE AGNOSTIC PUBLICATION DATA</p> <p><i>At MDN 2019 SRG presented the concept of Smart Data Platforms. Currently SRG is in the process of implementing the concept. The "Publication Data Platform" is intended to serve as a canonical data store for all publication channels. We'll report on the platform's architecture and technology (Kafka, Confluent, EBUCore, ...). We'll also share our experiences about governance issues during project planning, setup and execution. Finally, we'll discuss conflicts between architecture and agility and share our insights in finding solutions.</i></p> <p>Jürgen Grupp, SWR & Fabius Klemm, SRF</p>

13:30 – 14:00	<p>THE PITFALLS OF AI FOR AUTOMATIC METADATA EXTRACTION</p> <p><i>There is no doubt on the potential of AI for automatic metadata extraction (AME) in media assets. AI can help to recognize humans in image, video or audio; to analyse the spoken word; to auto-tag objects, events or semantical properties, just to name a few. However, while applying the out-of-the-shelf solutions for AME, customers often experience unexpected or undesired behaviour and are not satisfied with the results. This mismatch between the expectations and results has roots in various types of bias that are introduced along the AI pipeline. In the presentation, I would like to discuss the most significant types of bias for black-box data-driven AI pipeline, explain why those might cause AI models to fail and show the ways to cope with them.</i></p> <p>Hanna Lukashevich, Fraunhofer Institute for Digital Media Technology IDMT</p>
14:00 – 14:30	<p>THE IMPORTANCE OF METADATA IN PERSONALIZED NEWSLETTERS.</p> <p><i>Exploitation of metadata in automatically personalized newsletters - a very concrete use case that shows the immediate added value of qualitative metadata of content that we uploaded in our data lake in order to optimize our recommendations and to automate personalized newsletters + results.</i></p> <p>Emilie Nenquin, VRT</p>
14:30 – 15:00	<p>METADATA ARCHEOLOGY</p> <p><i>A presentation about my experience working on metadata, service architectures and finally AI after 28 years at EBU.</i></p> <p>Jean-Pierre Evain, EBU</p>
15:00 – 15:15	<p><i>Break</i></p>
<p>15:15 – 16:00 INCL. DEMO</p>	<p>THE RISE OF DATA FACTORIES: INTRODUCING BUSINESS WORKFLOWS INTO MEDIA INFRASTRUCTURES. RADIO FRANCE, MEDIA HIGHWAY & PSG BUSINESS CASES</p> <p><i>Things are changing in the broadcast field. Catalogue owners are assessing new data-centred mode of content management. We can witness the evolution of the management, delivery and marketing of broadcasters' catalogues of content through innovating and cutting-edge approaches. We see the rise of Data Factories which are more compliant with users and business need for more accessibility, visibility and interoperability of catalogues. This presentation will introduce you to Radio-France, Eurovision Media Services and Paris Saint-Germain business cases in terms of structuring, indexing and processing of contents that are expected to be better marketed by broadcasters.</i></p> <p>Steny Solitude – Perfect Memory, Guillaume Rachez – Perfect Memory, Diego Tercero – Radio France</p>
16:00 – 16:30	<p>PRESERVATION VS DIGITIZATION: THE LONG AND WINDING ROAD</p> <p><i>Preservation encompasses all the processes necessary for the reproduction, sharing, control, archiving, migration and destruction of documents (text, photos, audio, video, 3D, etc.). It is synonym to protection and backup. It is a chain that unites an author (s) and a user (s) through the transmission of a document online or offline! It involves the exchange of information generated by a transmitter according to a specific code and that the recipient interprets according to the same code in "space and time"! Digitization takes care of transformation (analog - digital - analog conversion) of the representation of documents. In this concert, the ISO/OAIS (Open Archival Information System) model marked out the conceptual field by proposing the central concept of [information representation] which transforms a [digital object] into an [information object]. It links these types of data to significant structural and semantic concepts and describes the potentially complex relationships between objects in order to facilitate sustainable packaging. Taking into account the processing carried out during the digitization process in order to facilitate the archiving of a digital document (PDI: Preservation Description Information) is essential. The presentation will also deal with the exchange between heterogeneous information systems as well as the implementation of a concrete solution! The processing of access management should open the doors to a promising vision for a next ISO/OAIS 2022 version!!! The conceptual work is underway and should lead to the drafting of a "UNESCO 2020 Tutorial" next fall. MIM-MDN will be a privileged place to assess the quality of the "ligne claire" of performance!</i></p> <p>Roger Roberts, Titan/UNESCO & Guy Maréchal, ASBL-Titan</p>

16:30 – 17:15

INCL. DEMO

PRACTICAL USE OF AI IN MEDIA PRODUCTION

Describe challenges in using AI in media production, both AI quality, IT infrastructure and workflows. Demonstration: show how we utilize AI in Mimir, our cloud based media management system.

Steinar Sørreide, Mjoll AS

17:15 – 17:45

WRAP-UP DAY 1 – KIM VILJANEN AND TORMOD VÆRVÅGEN**WEDNESDAY 10 JUNE****(08:45AM – 05:30PM CEST)**

08:45 – 09:15

APPLICATIONS OF AUTOMATED MEDIA EXTRACTION FROM YLE AREENA VIDEOS

In this work, we present two use cases and applications of automated media extraction from Yle Areena videos: i) high quality thumbnail selection; and ii) video scene boundary detection. Additionally, we present the setups and results of A/B-tests for both applications that were run in the Yle Areena production environment. Thumbnails play an important role in online videos, since they capture the essence of videos and provide the first impression to viewers. A good thumbnail makes a video more attractive to click and watch. Thus, we have implemented an automatic system that selects high quality and relevant thumbnails from a video. The extracted thumbnails are served to users via a component called the Artwork Recommender in Yle Areena. The Artwork Recommender implements an online learning framework that selects the best thumbnail among the extracted thumbnails for each user based on their context. Inspired by thumbnail extraction and artwork recommender, we have investigated if it is possible to extract relevant scenes from a video and serve them to the users like thumbnails. We have implemented an automatic way to detect and select relevant scenes from a video. Our implementation uses deep features captured from a video and its audio and mathematical optimization. This method has been used to extract short (15s-40s) promotional videos shown in the top recommendation in Yle Areena. A/B-tests show a statistically significant improvement in click-through-rate for the population that saw the videos.

Jan Kokko - Fourkind, Marek Matusiak – Siili Solutions, Jaakko Lempinen - YLE

9:15 – 10:00

HOW DO THE END-USERS FIND ALL THIS AUTOMATED METADATA?

The H2020 MeMAD project has built prototypes to demonstrate more efficient media production workflows based on human-assisted automated media enrichment tools. In particular, the prototypes offer automated content annotation supported by machine translation, cross-language search and retrieval of material and automated multi-lingual video subtitling. The systems were built iteratively using a user centered design philosophy to foremost take into account the specific needs for media production tasks. We present the results and learnings from a set of end-user trials, where we have validated executing semi-automated subtitling, video editing, content retrieval and content description with the help of several AME and machine translation technologies. Also, using the MeMAD end-user trials as a case study, we discuss different strategies for integrating these technologies into media industry workflows and the methodologies for evaluating the business fit and overall success of the semi-automated work processes.

Lauri Saarikoski, YLE**10:00 - 10:45**

INCL. DEMO

METADATA PROCESSING IN THE H2020 MEMAD PROTOTYPE PLATFORM

We present the H2020 MeMAD project prototype platform, a media production platform which combines a variety of microservices for AME (Automated Metadata Extraction) and processing of legacy archival metadata with the aim of improving accessibility and retrievability of material, both in the context of production (searching archives, derushing content and rough-cutting) and consumer delivery (auto-subtitling and content descriptions). We demonstrate how our platform integrates with a heterogeneous set of services, using at its core standards such as EBUCore, Web Annotations, EBU-TT-D and others. We show a set of strategies to bring both auto-extracted and legacy and manually curated archival metadata into the platform, but also show how consolidated metadata about finished programs can be exported for downstream processing. Finally, we show how this wealth of metadata is properly indexed for searching such that people can effectively find content – even across different languages thanks to machine translation – in large and opaque content databases thanks to the availability of through AME metadata.

Dieter Van Rijsselbergen, Limecraft

10:45 – 11:00	<i>Break</i>
11:00 – 11:30	<p>HOW OPEN SOURCE CAN HELP TO DECREASE THE COST OF BASIC TASKS</p> <p><i>Describe open source business model with a couple of real world examples (metadata extraction with MedialInfo, EBUCore output in MedialInfo, metadata edition with BWF MetaEdit, conformance checking with MediaConch...).</i></p> <p>Jérôme Martinez, MediaArea</p>
11:30-12:00	<p>YLE MEETS ANNIF - AN OPEN SOURCE TOOL FOR AUTOMATED SUBJECT INDEXING</p> <p><i>In the first part of our presentation we will introduce Annif, an open source tool for automated subject indexing. Annif is based on natural language processing and machine learning technologies. It can suggest subjects for documents using any subject vocabulary, in a variety of languages. Annif is being developed at the National Library of Finland and many cultural heritage institutions are starting to use it to support their subject indexing processes.</i></p> <p><i>In the second part we will present a project where Yle trained Annif using over a million Finnish and Swedish language articles along with their subjects, drawn from a vocabulary of 170,000 concepts. We also evaluated the quality of Annif by comparing its results to the service we currently use for subject indexing of articles. Because the quality of Annif has been promising the project will be carried on. The project made us think about the quality of subject indexing and how it can be measured.</i></p> <p>Osma Suominen – National Library of Finland, Pia Virtanen – Yle</p>
12:00 – 13:00	<i>Lunch</i>
13:00 – 13:30	<p>TO HANDLE OR NOT TO HANDLE BINGE MARKERS</p> <p><i>Presentation on DR PoC automatic detection of end credits - in collaboration with the vendor Media Distillery. Technology, results and business considerations in connection with automatic detection of end credits and the usage of binge markers.</i></p> <p>Birgitte Stannius, DR and Martin Prins, Media Distillery</p>
13:30 – 14:00	<p>FACIAL RECOGNITION: CHALLENGES IN PRODUCTION</p> <p><i>We will present the challenges encountered in using examples of correctly and incorrectly recognized faces in our video archives to improve our facial recognition model.</i></p> <p>Charlotte Bürki, RTS</p>
14:00 – 14:30	<p>SYNCHRONISING PROGRAMME SEGMENTS AND CLEAN FEEDS WITH RUNDOWNS FOR ARCHIVING</p> <p><i>The presentation addresses the problem of aligning recorded programmes (as broadcasted) arriving at ORF's archive with elements of the programme (segments available as separate clean files), as well as with clean feeds of the programmes. While the planned rundown is available as metadata, it is only on the granularity of seconds rather than frames, and the actual programme structure might have changed, in particular for live programmes. In order to automate this process, a proof of concept using visual similarity matching with compact descriptors has been realised on a set of news and magazine programmes. We report the insights gained from this proof of concept: what can be reliably automated, and which additional data are required to enable a fully automated process.</i></p> <p>Werner Bailer, JOANNEUM RESEARCH; Christoph Bauer, ORF, Johannes Kraus, ORF</p>
14:30 – 15:00	<p>AUDIO PARTIAL MATCHING (AND OTHER AUDIO TOOLS) FOR PROGRAM ANALYSIS</p> <p><i>The presentation will show how audio partial matching tools can be used for various purposes, including de-duplication, rights tracking and reuse detection. More specifically, it will describe proof-of-concepts for two specific use cases which have been realized and tested recently:</i></p> <p><i>(1) detection and localization of original program and cleanfeed segments within rundowns, which was tested e.g. using material from ORF, and,</i></p> <p><i>(2) analysis of radio and TV programs with respect to repetitions and structure, which was tested using material from German radio stations.</i></p> <p>Patrick Aichroth, Fraunhofer IDMT</p>
15:00 – 15:15	<i>Break</i>
15:15 – 16:00	AI MACHINE TRANSLATION OF SUBTITLING FOR LIVE NEWS AND SPORTS

INCL. DEMO	<p><i>AI machine translation of subtitling for live news and sports is a solution that allows broadcasters to localize their live streaming and TV broadcast event to new audiences. Leveraging cloud translate services is a simple way to multiply viewership and reach new audiences locally and internationally. Being able to scale subtitle translation of live events make localization of live streaming available 24/7 to more than 40 languages. In this presentation, we will demonstrate the pitfalls, challenges, and production-ready use cases that will provide successful and accurate automated translation of live news and sports events.</i></p> <p>Giovanni Galvez, Syncwords</p>
16:00 – 16:45 INCL. DEMO	<p>AI QURATION TECHNOLOGIES FOR NEWSROOM SYSTEMS</p> <p><i>We will describe results from the German Research Project QURATOR which addresses AI/ML-based content curation technologies in various fields. Our focus lies specifically on the Media / Broadcast industry and, in particular, Newsroom Systems. We will discuss features such as summarisation, timelining and semantic indexing, among others, which have been integrated in the Condat Smart Content Discovery Platform and its core, the Smart Media Engine.</i></p> <p>Jan Thomsen, Sacha Prella, Condat AG</p>
16:45 - 17:15	<p>SUM-UP AND TAKE-AWAYS KIM VILJANEN – YLE AND TORMOD VÆRVÅGEN</p>
17:15 - 17:30	<p>FAREWELL JEAN-PIERRE EVAIN</p>
