



**TOSCA**<sup>MP</sup>

# Report on dissemination and standardisation activities Y2

Deliverable D7.1.2



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3	2013-09-26	Further input from partners
4	2013-09-27	Updates from partners
5	2013-09-27	Version for internal review
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# 1 Executive Summary

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This document is a report on dissemination and standardisation activities carried out by the project partners during the first year of the project.

Dissemination covers the project cooperation with its Stakeholder Board, as well as external communication.

Six public deliverables have been delivered during Year 2. Sixteen papers and articles have been released in international publications. Project partners have made presentations, presented posters and participated in demonstrations in eighteen international symposiums, conferences or workshops (three conference presentations already accepted for the next period).

The work on standardisation has intensified during Year 2. Several contributions have been made to MPEG and the EBU-AMWA FIMS project also registered by SMPTE. Several TOSCA-MP partners represent the project by participating in meetings to promote the solutions developed by the project.

Future dissemination plans until the end of the project are also included.

## 2 Introduction

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### 2.1 Purpose of this Document

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This document summarises the dissemination and standardisation activities of the project months 13-24.

### 2.2 Scope of this Document

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The document lists the activities and provides pointers to further documentation (e.g. publications, slides, etc.)

### 2.3 Status of this Document

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This is the final version of D7.1.2.

## 3 Dissemination Tools and Mechanisms

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### 3.1 Dissemination Mechanisms

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Since it was started, the project uses the following mechanisms for disseminating project results.

It consists of sharing project results through all possible practical means including publications in technical revues, participation in workshops, demonstrations, exhibitions and conferences. It also comprises the publication of deliverables and maintenance of the project website.

- **Articles in targeted magazines and journals:** During Year 2, TOSCA-MP partners have published articles in sixteen international magazines and publications (e.g. the Journal of Visual Communication and Image Representation, IEEE Multimedia, Multimedia Tools and Applications).
- **Papers at scientific conferences:** During Year 2, TOSCA-MP results have been presented at sixteen international and regional scientific conferences (e.g. IEEE International Symposium on Multimedia, IEEE International Conference on Acoustics, Speech, and Signal Processing).
- **Demonstrations:** During Year 2, the project has participated in two demonstrations (11th European Interactive TV Conference and 14th International Workshop on Image and Audio Analysis for Multimedia Interactive Services).
- **Presentations related to FP7/H2020 activities:** The session proposal “Pervasive access to media content” submitted by TOSCA-MP to the ICT LAUNCH conference was accepted.
- **Targeted media and publicity activities:** In this reporting period the project was active at the NEM SUMMIT (October 2012, Istanbul) and at IBC 2013 (September 2013, Amsterdam). Furthermore the first field trial was done in conjunction with the EBU MDN workshop.
- **Information activities within TOSCA-MP partner organisations:** During Year 2, TOSCA-MP partners have kept their senior managers about TOSCA-MP, its progress and its benefits. This acts as a catalyst for disseminating TOSCA-MP results. It also helps to keep TOSCA-MP business, dissemination and exploitation focussed.
- **TOSCA-MP public Website:** The public TOSCA-MP Website is regularly updated. It ensures that all interested parties are informed about the project and its progress, and can access the publicly available results of the TOSCA-MP project, including public deliverables and publications. The address of the public TOSCA-MP Website is <http://www.tosca-mp.eu>.
  - Public deliverable published by TOSCA-MP can be found at <http://tosca-mp.eu/publications/public-deliverables/>
  - Publications or presentations can be accessed from <http://tosca-mp.eu/publications/conferences-presentations/>
- **Individual partners’ homepages:** Project partners provide information about TOSCA-MP on their homepages (with a focus on their share of the work, of course) and link to the project’s homepage for further information (which will also increase the search engine ranking of the TOSCA-MP homepage).
- **Other online services:** In this respect Twitter was used and a facebook page maintained in continuation of the activities in the first year.
- **Liaison with other projects:** As a result of a TOSCA-MP partner being a member of the FP7 LinkedTV Advisory Board, a liaison has been established with this project also partly working on automatic metadata extraction.

### 3.2 Industrial Stakeholder Board

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The main objective of the Industrial Stakeholder Board (ISB) consists of assessing the relevance of the project work. Its members also provides advice and market insight on the future implementation of automatic metadata extraction tools. The opinion of the ISB impacts the development the TOSCA-MP’s exploitation plan.



The Industrial Stakeholder Board is formed of key experts and influential personalities in businesses relevant to work carried out in the project, independent of their geographical location but preferably equally representing different economic regions of the world.

Two Industrial Stakeholder Board meetings have been organised during Year 2. The project approach and methodology (modelling and processes) has been presented and reviewed. Each meeting has been subject to a report.

During Year 2, two out of ten business goals have been presented in detail:

- News - fast retrieval of very recent material
- Sports – assisted production of sport events and summarisation

The feedback on the project activities has been very positive. Members of the ISB said they were impressed by the work done. They also provided rich feedback on current market trends and related state-of-the-art pre-operational developments e.g. at BBC and Disney.

## 4 Dissemination Activities in Year 2

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### 4.1 Website

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The TOSCA-MP website [www.tosca-mp.eu](http://www.tosca-mp.eu) serves as the primary source of information for the public. It provides extensive information about the project TOSCA-MP such as the idea behind this project, work plans, list of milestones and technical sections.

It also provides information about the consortium, contact details linked to partner's website, each partner's description and their rolls within this project.

The scientific publications and presentations, and the public deliverables produced by the project are presented at this website and are updated regularly.

- Publications or presentations can be accessed from <http://tosca-mp.eu/publications/conferences-presentations/>
- Public deliverable published by TOSCA-MP can be found at <http://tosca-mp.eu/publications/public-deliverables/>

The news section presents the partners and the public on upcoming presentations, conferences, events, development and released technologies associated to TOSCA-MP. The news section also offers visitors the possibility to comment on the news to increase the exchange of information in relation to the research articles and news. This interactive section of the website provides us very useful information about the opinion of the website's visitors and their potential interest on the project researching area.

The website is updated regularly.

A contact form has been set up in order to contact the project coordination via [tosca-mp-office@joanneum.at](mailto:tosca-mp-office@joanneum.at) and to send questions or requests.

Widgets for Twitter and Facebook are contained on the TOSCA-MP website in order to broaden the audience for the project.

Figure 1 below shows a screen shot of the TOSCA-MP website which contains the following main section:

- Project
- News
- Consortium
- Work Plan
- Technical Section
- Publications
- Contact



The screenshot shows the TOSCA-MP website interface. At the top, there is a navigation menu with tabs for Project, News, Consortium, Work Plan, Technical Section, Publications, and Contact. A search bar is located to the right of the menu. The main content area is titled 'Project' and contains the following text:

**TOSCA-MP: Task-oriented search and content annotation for media production**

The TOSCA-MP project aims to develop user-centric content annotation and search tools for professionals in networked media production and archiving (television, radio, online), addressing their specific use cases and workflow requirements. The project brings together 10 partners from 5 European countries including industry partners providing solutions for the media industry, public service broadcasters as well as their European association, a university and research centres.

TOSCA-MP investigates scalable and distributed content processing methods performing advanced multimodal information extraction and semantic enrichment. Other key technology areas include search methods across heterogeneous networked content repositories and novel user interfaces. An open standards based service oriented framework integrates the components of the system.

TOSCA-MP enables professionals in media production and archiving to seamlessly access content and indexes from distributed heterogeneous repositories in the network. This will be achieved by providing technologies that allow instant access to a large network of distributed multimedia databases, including beyond state-of-the-art metadata linking and alignment. The distributed repositories can be accessed through a single user interface that provides novel methods for result presentation, semi-automatic annotation and means of providing implicit user feedback.

The networked approach of TOSCA-MP enables content holders to leverage scalable distributed processing in the network, using both in-house or external service models. The project will develop models of key user tasks in the audiovisual media production workflow. These models are used to adapt the components of the system to the specific and dynamic requirements of real user tasks in the media production domain, and to evaluate the tools in a cost-effective way.

TOSCA-MP is a project under the 7<sup>th</sup> Framework Programme of the European Union, running from October 2011 to March 2014.

Posted by admin at 14:36

On the right side of the page, there is a 'Latest News' section with a list of updates, a Twitter feed for 'Tosca\_mp', and a Facebook widget for 'Tosca-mp auf Facebook'.

Figure 1: screen shot of the TOSCA-MP website

#### Recent updates:

- The list of deliverables has been maintained throughout the reporting period and all public deliverables made available
- All partners have updated the page reflecting dissemination activities
- Parts describing interim results from the research and development work in the project have been updated (e.g. summarising the integration activities and PoC developments).

## 4.2 Public Documents

Public deliverable published by TOSCA-MP can be found at <http://tosca-mp.eu/publications/public-deliverables/>

Publications or presentations can be accessed from <http://tosca-mp.eu/publications/conferences-presentations/>

### 4.3 Publications and Presentation and Scientific/Technical Events

#	Category	Status	Partner(s) responsible/involved	Author(s)	Conference, Journal, Event	Date of publication / event	Location of event	Title
1.	Paper	Published	JRS, IRT, RAI	W. Bailer, P. Altendorf, A. Messina, F. Negro, G. Thallinger	NEM Summit	15.10.2012	Istanbul, TR	A System for Task-Oriented Content Analysis and Search in Media Production
2.	Presentation	Published	VRT,KUL	Matton, M., Moens, M.-F.	iMinds, the conference 2012	08.11.2012	Gent, BE	Automatic semantic annotation of video
3.	Paper	Published	FBK	Nicolas Ruiz, Arianna Bisazza, Roldano Cattoni and Marcello Federico	International Workshop on Spoken Language Translation (IWSLT-2012)	6-7.12. 2012	Hong Kong	FBK's Machine Translation Systems for IWSLT 2012's TED Lectures
4.	Paper	Published	JRS, RAI, HHI, IRT	H. Fassold, R. Borgotallo, M. Liu, P. Altendorf, S. Wechtitsch, P. Ndjiki-Nya, A. Messina, A. Hofmann, W. Bailer, P. Schallauer	The IEEE International Symposium on Multimedia 2012	10-12.12.2012	Irvine, CA, USA	Automated Visual Quality Analysis for Media Production
5.	Paper	Published	JRS	W. Bailer	The IEEE International Symposium on Multimedia 2012	10-12.12.2012	Irvine, CA, USA	Learning Multiple Sequence-based Kernels for Video Concept Detection

#	Category	Status	Partner(s) responsible/involved	Author(s)	Conference, Journal, Event	Date of publication / event	Location of event	Title
6.	Journal article	Published	KUL	Poulisse, G-J., Patsis, Y., Moens, M-F.,	Multimedia Tools and Applications, May 2012			Unsupervised scene detection and commentator building using multi-modal chains,
7.	Paper	Published	JRS	Werner Bailer, Klaus Schoeffmann, David Ahlström, Wolfgang Weiss, Manfred Del Fabro	19th International Conference on Multimedia Modeling	7-9.01.2013	Huangshan, CN	Interactive Evaluation of Video Browsing Tools
8.	Presentation	Published	FBK/ CELCT	Rachele Sprugnoli, Giovanni Moretti, Matteo Fuoli, Diego Giuliani, Luisa Bentivogli, Emanuele Pianta, Roberto Gretter, Fabio Brugnara	9° Convegno Nazionale dell'Associazione Italiana di Scienze della Voce	21-23.01.2013	Venice, Italy	Crowdsourcing High Quality Speech Transcriptions: Comparing Two Methods on Different Languages
9.	Poster	Published	VRT, RAI	Mike Matton, Alberto Messina	EBU Production Technology Seminar	29.-31.01.2013	Geneva, CH	Task-Oriented Search and Content Annotation for Media Production
10.	Poster	Published	JRS	Fürntratt H., Rosner J., Stiegler H., Fassold H.	GPU Technology Conference	24.-27.03.2013	San Jose, CA, USA	GPU-accelerated SIFT descriptor matching

#	Category	Status	Partner(s) responsible/involvement	Author(s)	Conference, Journal, Event	Date of publication / event	Location of event	Title
11.	Technical report (in German)	Published	IRT	Peter Altendorf, Gordana Polanec-Kutija	-	28.03.2013		Vergleich von ESBs/SOA-Plattformen.
12.	Journal article	Published	JRS, EBU	Florian Stegmaier, Werner Bailer, Tobias Bürger, Mari Carmen Suárez-Figueroa, Erik Mannens, Jean-Pierre Evain, Martin Höffernig, Pierre-Antoine Champin, Mario Döller, Harald Kosch	IEEE Multimedia	01.04.2013		Unified Access to Media Metadata on the Web: Towards Interoperability Using a Core Vocabulary
13.	Presentation (in German)	Published	JRS	Werner Bailer	HHI Praxisseminar "Effiziente Erschließung digitaler Bildinhalte"	10.04.2013	Berlin, DE	Neue Metadatenstandards für multimediale Archive
14.	Presentation (in German)	Published	IRT, HHI	Peter Altendorf, Matthias Elser, Ronald Mies, Sebastian Gerke	vfm Frühjahrstagung 2013 – Spring conference of the association for media information and documentation	23.04.2013	Ravensburg, DE	TOSCA-MP: Aufgabenorientierte Inhaltsanalyse und Suche in der Medienproduktion

#	Category	Status	Partner(s) responsible/involved	Author(s)	Conference, Journal, Event	Date of publication / event	Location of event	Title
15.	Presentation	Published	PLY	Jesús Contreras	Language Technology Innovation: Intelligent Interactive Multilingual (LT-Innovate.EU)	25.04.2013	Madrid, ES	How can intelligent content, speech and translation technologies help the Tourism industries?
16.	Presentation	Published	PLY	Jesús Contreras, Sinuhé Arroyo	Enterprise Search Europe 2013	16.05.2013	London, UK	CASE STUDY: Turning Traditional Search into Innovation Management with Semantic Technology
17.	Paper	Published	FBK/CELC	Rachele Sprugnoli, Giovanni Moretti, Matteo Fuoli, Diego Giuliani, Luisa Bentivogli, Emanuele Pianta, Roberto Gretter, Fabio Brugnara	IEEE International Conference on Acoustics, Speech, and Signal Processing 2013	26-31.05.2013	Vancouver, CA	Comparing Two Methods for Crowdsourcing Speech Transcription
18.	Paper	Published	JRS, RAI, EBU, VRT	Masanori Sano and Werner Bailer and Alberto Messina and Jean-Pierre Evain and Mike Matton	Proceedings of the 11th IVMSP Workshop on 3D Image/Video Technologies and Applications	10.-12.06.2013	Seoul, KR	The MPEG-7 Audiovisual Description Profile (AVDP) and its Application to Multi-view Video

#	Category	Status	Partner(s) responsible/involved	Author(s)	Conference, Journal, Event	Date of publication / event	Location of event	Title
19.	Journal article	Published	KUL	Pham, P. T., Deschacht, K., Tuytelaras, T., Moens, M.-F.	Journal of Visual Communication and Image Representation	18.06.2013		Naming persons in video: Using the weak supervision of textual stories
20.	Demo	Published	RAI, JRS	Alberto Messina and Fulvio Negro and Werner Bailer	11th European Interactive TV Conference	24.-26.06.2013	Como, IT	Task-based Assessment of Automatic Metadata Extraction
21.	Demo	Published	RAI, DTO, HHI, PLY, JRS	Alberto Messina and Frank Gläser and Eugene Mbanya and Carlos Ruiz and Werner Bailer	14th International Workshop on Image and Audio Analysis for Multimedia Interactive Services	04.07.2013	Paris, FR	TOSCA-MP: Task-oriented Search and Content Annotation for Media Production
22.	Paper	Published	KUL	Niraj Shrestha, Ivan Vulic	Student Research Workshop associated with RANLP, 2013	9.-11.9.2013	Hissar, Bulgaria	Named Entity Recognition in Broadcast News Using Similar Written Texts
23.	Paper	Published	KUL	Niraj Shrestha, Ivan Vulic and Marie-Francine Moens	LICT first scientific symposium on adaptivity in ICT, 2013.	11.9.2013	Heverlee, BE	An IR-Inspired Approach to Recovering Named Entity Tags in Broadcast News
24.	Paper	Published	KUL	Niraj Shrestha, Ivan Vulic and Marie-Francine Moens	6th Information Retrieval Facility Conference, IRFC 2013	7-9.10.2013	Limassol, Cyprus	An IR-Inspired Approach to Recovering Named Entity Tags in Broadcast News



#	Category	Status	Partner(s) responsible/involved	Author(s)	Conference, Journal, Event	Date of publication / event	Location of event	Title
25.	Paper	Accepted	HHI	Sebastian Gerke, Shiwang Singh, Antje Linnemann, Patrick Ndjiki-Nya	IEEE Visual Communications and Image Processing	17-20 November 2013	Sarawak, Malaysia	Unsupervised Color Classifier Training for Soccer Player Detection
26.	Journal article	Invited	HHI, JRS	Werner Bailer, Antje Linnemann, Sebastian Gerke und Patrick Ndjiki-Nya	FKT Fernseh- und Kinotechnik	October 2013		Standardisierte Beschreibung von automatisch extrahierten Metadaten in der Medienproduktion
27.	Paper	Accepted	KU Leuven	Dusart, Thibaut, Nurani Ventikasubramanian, Aparna, Moens, Marie-Francine	The 2013 ACM International Workshop on Multimedia Analysis for Ecological Data	October 21, 2013	Barcelona, Spain	Cross-Modal Alignment for Wildlife Recognition

## 4.4 Other dissemination activities

### 4.4.1 Field trials

Besides serving as an opportunity to gather further feedback from the user community, the field trial day held in connection with the EBU MDN workshop in Geneva in June 2013 served also as a dissemination event for the platform. More details on the event, visitors and the feedback received can be found in the field trial report D6.4.2.

### 4.4.2 IBC 2013

The TOSCA-MP project had a booth at the International Broadcasting Convention's Future Zone (# 8.F48).

At the Future Zone of this year's IBC, the project successfully presented the proof-of-concept system, including the Distributed Repository Framework (DRF) for storing essence and metadata, the Metadata Production and Management Framework (MPMF) for executing content analysis processes, the Control & Configuration user interface for starting and managing these processes, as well as the search system and result visualisation. Several content analysis services were included, some of them running live at the booth. For viewing and validating results, the verification tool for quality analysis results and an HTML5-based viewer for MPEG-7 AVDP documents containing analysis results were shown.

The TOSCA-MP presentation attracted numerous visitors, including a group of Flemish Members of Parliament and representatives from the media industry on a guided tour through the IBC show. Automatic content analysis is clearly a hot topic, with the quality analysis and related standardisation activities (EBU QC, FIMS QA) paving the way for a broader adoption of these technologies by the industry. The search system and novel result presentation also received high attention from the visitors. On Sept. 17th, an article about TOSCA-MP appeared in the IBC daily, a publication distributed to all exhibition and conference visitors.

As the booth presented work on quality analysis of members of the EBU QC group (JRS, RAI), the TOSCA-MP was on the list of related booths distributed at the EBU booth, attracting further visitors. Thus the TOSCA-MP booth also showed a poster of the table of QC checks the EBU QC group is specifying. Also on IRT's company booth the TOSCA-MP booth was advertised.

The discussions with visitors underlined the commercial exploitation potential for the results from TOSCA-MP (in Europe and beyond), not only for individual components (e.g., search system or specific analysis services like QA or ASR), but also for an integrated system. Three members of the industrial stakeholder board visited the TOSCA-MP booth.

An article on TOSCA-MP was also published in the September 17<sup>th</sup> issue of IBC Daily (to the right).

theibcdaily Tuesday 17.09.13 59

## Data mining

Joanneum Research

By Adrian Pennington

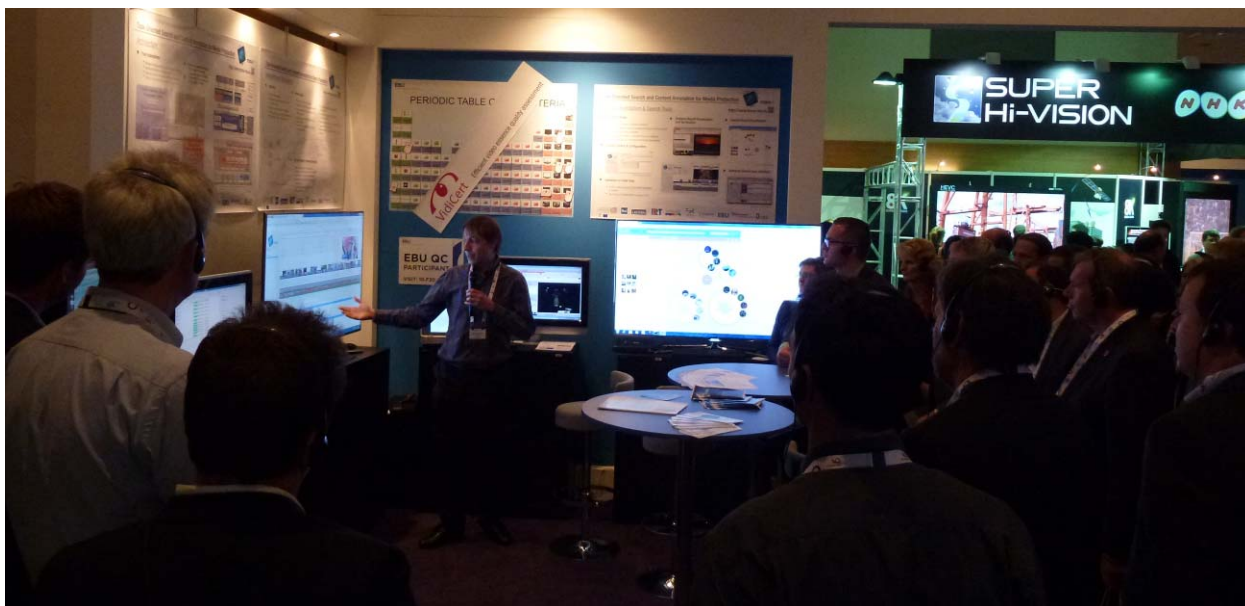
If we learn anything from IBC2013 it's that big data is useless without context and less than useless if it's not searchable.

Making the links between different types of content even richer is project TOSCA-MP (Task-Oriented Search and Content Annotation for Media Production) which aims to develop user-centric content annotation and search tools for production and archive.

Austrian research institute Joanneum Research is showing its work in progress at IBC including novel algorithms and tools for automatic information extraction from multimedia content. This includes semantic enrichment from speech and visual information, quality analysis, and genre-adaptive analysis, as well as tools and user interfaces for search and result presentation.

It's a service-oriented architecture compatible with EBU/AMWA FIMS and is funded under the 7<sup>th</sup> Framework Programme of the EU until March 2014.

8.F48



**Figure 2:** Mike Matton (VRT) presenting the project to the group of Flemish visitors.



**Figure 3:** Presentations and Discussions ongoing at the TOSCA-MP booth.

#### 4.4.3 Project folder

For dissemination events like IBC, a new project folder has been created:

<http://tosca-mp.eu/wp-content/uploads/2013/09/digf012013-TOSCA-MP-Folder.pdf>.

#### **4.4.4 Participation in benchmarking activities**

In Year 2, partners have participated in different benchmarking initiatives. PLY and JRS have jointly participated in the MediaEval Search and Hyperlinking task, with PLY addressing the search subtask, and JRS addressing the linking subtask.

HHI and JRS have participated in the TRECVID Semantic Indexing task, experimenting with fusion of their individual concept classifiers. JRS has also participated in the Instance Search task, using the algorithms developed for video linking and near duplicate detection in WP2.

As in 2012, JRS has again co-organises the Video Browser Showdown (VBS) at MMM, and also participated with their browsing tool. The datasets from 2012 and 2013 have been published on MAMMIE.

#### **4.4.5 IRT**

IRT has been active in several working groups of the public broadcasters in Germany, Austria and Switzerland to appropriately inform its associates about TOSCA-MP progress and results. In several bilateral meetings with German public broadcasters an exchange of know-how took place on the deployment of SOA-based solutions in production environments. Specifically IRT had meetings with Hessischer Rundfunk (HR) and Rundfunk Berlin Brandenburg (RBB) on SOA deployments, as well as with Zweites Deutsches Fernsehen (ZDF), with whom IRT also cooperated with respect to the realization of a Proof of Concept.

IRT consolidated the information on and references to TOSCA-MP on the company's homepage (<http://www.irt.de/en/research/production.html>).



## 5 Dissemination Plans for Year 3

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### 5.1 Targeted Conferences, Events and Journals

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Dissemination will continue targeting new conferences and publications, and contributing to yearly recurrence of relevant events. The project website will be update with new deliverables and publications.

#### 5.1.1 *JRS*

JRS will target publishing results at ACM International Conference on Multimedia Retrieval, and the and the International Multimedia Modelling Conference. Related to the work on task modelling, it considered to target also conferences in the area of business process modelling.

JRS will co-organise the third edition of the Video Browser Showdown (VBS) at MMM 2014 in Dublin. In order to gather more data for evaluation, the VBS will be held as a longer session on the day before the conference, with only a part of it in front of audience. We will again make use of the TOSCA-MP data set hosted on MAMMIE for the competition.

#### 5.1.2 *IRT*

IRT intends to present results from TOSCA-MP that are relevant to professional media production in either a professional article or as part of the colloquia series which is jointly organised by German FKTG<sup>1</sup> and IRT and open to all public.

IRT will also continue to use its contacts and its active participation in several working groups of the public broadcasters in Germany, Austria and Switzerland to appropriately inform about the progress and results of TOSCA-MP.

#### 5.1.3 *FBK*

FBK targets publishing results in workshops and conferences in the area of speech processing. FBK targets also publishing results on ground truth generation through crowdsourcing on a journal.

#### 5.1.4 *KULeuven*

KU Leuven submits a journal article to Multimedia Tools and Applications, Springer, Special Issue on "Content Based Multimedia Indexing" by September 22, 2013 on the topic of concept detection in sports videos. KU Leuven also targets publishing results at the ACM International Conference on Multimedia Retrieval regarding concept recognition in wedding videos and generating visual summaries from them.

#### 5.1.5 *DTO*

DTO intends to present results on international fairs and internal events like the Technicolor Technology Week. DTO will also continue publishing academic workshops and conferences (e.g. WIAMIS).

#### 5.1.6 *HHI*

HHI will continue publishing at high impact conferences as IEEE International Conference on Image Processing and IEEE Visual Communications and Image Processing. TOSCA-MP results will be presented at conventions as the International Broadcasting Convention in Amsterdam or the IFA in Berlin. Furthermore during international events organised at HHI, TOSCA-MP partners will be invited to present joint achievements to our international industrial guests.

#### 5.1.7 *PLY*

It is the goal of PLY dissemination strategy to foster the dissemination of the TOSCA-MP project results in research and technology development to the targeted communities, to attract a larger and active professional community to the new advances proposed by the project and to prepare for the later

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<sup>1</sup> Fernseh- und Kinotechnische Gesellschaft e.V. (<http://www.fktg.org>)

adoption of the developed technologies in various application domains. Dissemination activities will evolve following the progress and the realization of tangible results, in order to promote the ideas of the project.

PLY will keep targeting events both Academia (e.g. WIAMIS, ACM Conferences...) and Industry (e.g. Enterprise Search conferences, LT Innovate...) oriented by participating in an appropriate number of exhibition, professional workshops and other appropriate demonstration forums such as exhibitions and fairs, so that the developed technologies are disseminated to the chosen audiences. Having this approach, PLY will ensure a continuous innovation by keeping an eye on the main results of research and the updates on the current state of the art, and at the same time, ensure the right transfer and sustainable use of TOSCA-MP results.

### **5.1.8 RAI**

RAI plans to cooperate with other partners whenever appropriate in relation to presentations, demonstrations and publications..

## 5.2 Involvement of Industrial Stakeholder Board

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Collaboration with the Industry Stakeholder Board will continue. The members of the stakeholder board have been invited to visit TOSCA-MP at IBC (see 4.4.2). A next phone conference of the board is planned for October 2013. In the final phase of the project, the discussion with the stakeholder board will help shaping the exploitation plan for the project results.

## 5.3 Final Field Trials

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The final field trials will take place from January 20-24 2014 at RAI in Turin and at VRT in Brussels. The field trials have been announced at IBC in order to reach a broader range of participants.

## 6 Standardisation Activities

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### 6.1 Activities in Year 2

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During Year 2, TOSCA-MP partners have made several contributions to different international standardisation efforts:

#### **6.1.1 ISO/IEC MPEG Multimedia Preservation (MP-AF)**

JRS, RAI, VRT, EBU and HHI have made contributions to work in the Multimedia Preservation AhG. In response to the call for proposals in Oct. 2012, proposing the MPEG-7 Detailed Audiovisual Profile, the MPEG-21 CEL/MCO rights representation and MPEG-7 extensions for quality metadata. Several input documents were submitted to the subsequent meetings, and members of the partners were present at all MPEG meetings in the period. The work resulted in a preliminary working draft at the 104<sup>th</sup> MPEG meeting in April 2013. At the same meeting, the requirements for extensions to MPEG-7 for quality metadata were accepted by the requirements group. A proposal, aligned with the EBU QC definitions of quality checks, has been submitted and presented at the 105<sup>th</sup> MPEG meeting. The discussion on the scope of the extension will continue at the upcoming meetings. A Committee Draft (CD) of MP-AF is expected for the 107<sup>th</sup> MPEG meeting in January 2014.

#### **6.1.2 ISO/IEC MPEG Compact Descriptors for Visual Search (CDVS)**

RAI has been following the work for CDVS for some time, and has several times raised the need to consider video in addition to still images, proposing use cases motivated among others by the TOSCA-MP business goals. At the 105<sup>th</sup> MPEG meeting, a submission by RAI and JRS has been presented, stressing the need for video descriptors in the audiovisual media production and archiving applications, and outlining a framework that could be standardised. As similar requirements were asked for applications in the automotive industry, an AhG to define the requirements and survey existing technologies has been established. The results are to be presented at the 106<sup>th</sup> MPEG meeting in October.

#### **6.1.3 EBU QC**

The programme has a simple Terms of Reference: "...how to best implement Quality Control (QC) in radio and television production facilities, which are increasingly file-based".

In order to do this the QC programme was formed as a collaboration between the EBU member broadcasters and the QC vendors (JRS, Tektronix, Interra, Digimetrics, Cube-tec, Amberfin, Emotion, VidCheck, Venera, Media Service, Minnetonka) who's names are well known in the file, measurement and QC world.

EBU QC is defining a set of reference points and associated test criteria.

EBU QC is collaborating with FIMS on the implementation of Quality Control in SOA environments.

IRT, JRS and RAI contributed to the EBU QC working group and its coordination with the FIMS Service Definition Project on Quality Analysis.

#### **6.1.4 FIMS**

FIMS is an international consortium of more than 90 companies. The goal of FIMS is to define web service interfaces (SOAP or REST). Interfaces for content capture, transform and transfer have already been specified and are being published by SMPTE. The specification of the interface for managing repositories has been announced at IBC 2013. Reference implementations exist in both SOAP and REST. Technical work has started on the definition of the interface for Quality Analysis / Control. Future priorities are, in order, "automatic metadata extraction", "IMF/OPL", "timecode support" and "media asset management". More information on FIMS and its members can be found at <http://www.fims.tv>.

TOSCA-MP is represented in FIMS by JRS, EBU, IRT and RAI. These TOSCA-MP partners have been active in promoting the need for FIMS to develop SOA service interface for automatic metadata extraction. This is now high on the list of FIMS and a charter is being defined by the FIMS Business Board chaired by Turner Broadcasting International (Atlanta).

FIMS is also working on Quality Analysis/Control in close cooperation with EBU QC mentioned above. IRT has made a contribution providing an example of structured metadata report as could be provided by QC tools.

Significant progress should have been made on both QA and automatic metadata extraction by the time the TOSCA-MP project ends.

During the second project year, IRT, RAI and JRS continued their contribution to the EBU-AMWA FIMS (Framework for Interoperable Media Services) activities (in online "WebEx" meetings as well as in physical meetings), especially of the FIMS working group on definition of a service interface for quality analysis (FIMS Service Definition Project on Quality Analysis). The group started its work in May 2013.

### **6.1.5 W3C Media Annotations API**

The specification of the W3C Media Annotations API is still in the final phase of becoming a W3C recommendation. It is an API to handle descriptions in the core metadata format defined in the W3C Ontology for Media Resources, to which JRS and EBU have contributed. JRS has been involved in the reference implementation of the API. Following comments on the candidate recommendation, the specification has been updated to better support the interoperability between web service implementation (such as the services developed in TOSCA-MP) and client implementations running in a web browser.

## **6.2 Planned Standardisation Activities**

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Year 2014 should be a key year for standardisation in the field of automatic metadata extraction and quality control. TOSCA-MP members representing the project in MPEG, EBU QC and FIMS will be strongly solicited.

### **6.2.1 EBU/AMWA FIMS**

Until the end of the project, a draft of the FIMS QA service interface specification is expected. Some TOSCA-MP partners plan to implement FIMS compliant version of the quality analysis services. The second aspect in FIMS QA is the specification of the report format. TOSCA-MP partners aim to align this format between EBU QC, FIMS QA and MPEG MP-AF.

### **6.2.2 MPEG MP-AF**

Until the end of the project, a Committee Draft of the specification is expected, which will contain specifications for the quality analysis results produced by the tools in TOSCA-MP

### **6.2.3 MPEG CDVS**

Depending on the analysis by the AhG on descriptors for video search, this activity will be considered as a next stage in the work of CDVS or might involve into a new activity within MPEG. RAI, JRS and HHI will follow this activity and contribute where possible.



## 7 Conclusions

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The collaboration with the Industry Stakeholder Board is active and effective. Good feedback has been received, which has been taken into account by the project partners.

Dissemination has been rich using all available communication mechanism including publication in newspapers, participation in conferences and demonstrations / benchmarking. All information on the project activities, its deliverables and publications has been regularly updated on the project website.

Standardisation activities are progressing well. TOSCA-MP and the partners involved have been successfully influenced relevant standardisation activities in ISO/IEC MPEG, EBU QC and EBU-AMWA FIMS.

## 8 Glossary

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### Terms used within the TOSCA-MP project, sorted alphabetically.

AVDP	AudioVisual Description Profile
CDVS	Compact Descriptors for Visual Search
MPDI	Multimedia Preservation Description Information

### Partner Acronyms

DTO	Technicolor, DE
EBU	European Broadcasting Union, CH
FBK	Fondazione Bruno Kessler, IT
HHI	Heinrich Hertz Institut, Fraunhofer Gesellschaft zur Förderung der Angewandten Forschung e.V., DE
IRT	Institut für Rundfunktechnik GmbH, DE
K.U.Leuven	Katholieke Universiteit Leuven, BE
JRS	JOANNEUM RESEARCH Forschungsgesellschaft mbH, AT
PLY	Playence S.L., ES
RAI	Radiotelevisione Italiana S.p.a., IT
VRT	De Vlaamse Radio en Televisieomroeporganisatie NV, BE

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