NoTube

Networks and ontologies for the transformation and unification of broadcasting and the Internet

FP7 – 231761

D9.3 v4 Continuous report on standardisation recommendations

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The continuous report on standardisation recommendations provides an overview of potential and actual contributions and participations in standardisation activities.

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Abstract (for dissemination)	The continuous report on standardisation recommendations provides an overview of potential and actual contributions and participations in standardisation activities. In the third year, we can see first concrete contributions to standards and specifications in the television and Web domains.
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1. Introduction

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2. Standardisation activities report

- TV Anytime - http://www.tv-anytime.org/

IRT participates actively in the annual ETSI TV-Anytime Maintenance Procedure which is organized by Jean-Pierre Evain from EBU. This includes contributions of proposals for modifications and/or extensions of the TV-Anytime standard as well as discussing requested changes in general and reviewing modifications of the ETSI standard documents.

IRT contributed findings from the work with TV-Anytime in NoTube to the ETSI 2011 TV-Anytime Maintenance Procedure. As a result of this, ETSI TS 102 822-3-1 V1.7.1 (2011-07) now contains a modification of the RelatedMaterialType. RelatedMaterial, an element used to provide additional related descriptive information about a credit item. A credit item is an element to constitute a list of credits for the specified programme. The MediaLocator was previously limited to one location. Now, it specifies one or more locations of the media asset (now: maxOccurs="unbounded"). A requirement coming from the NoTube Use case 7a was to have an unbounded choice of the elements MediaLocator and SegmentReference inside the RelatedMaterialType. For instance a related resource like a video or a music title can be hosted / provided at multiple locations.

Another requirement coming from Use case 7a was the description of free text in the InlineMediaType to have the possibility to store textual content. Besides the PromotionalText Element in the BasicDescription of a Programm it is not possible to describe free text not referring to a concrete element like title or synopsis. Besides binary content as InlineMedia it would be preferable to have also the possibility. However, after contributing this request to the TV-Anytime 2011 Maintenance Phase, it was dropped again as a result of discussions in the review group. The reason was that it would imply significant changes for TV-Anytime implementers due to the change of the MediaLocatorType. In NoTube, this requirement coming from use case 7a was adequately answered making use of an xsd-enhancement.

- EGTA advertising schema

EGTA is the European Group of Television Advertisers. egtaMETA is being developed by the EBU to provide a standard for advertisement metadata. NoTube is among the first adopters of this nascentnacent standard and is annotating a set of multilingual advertisements with this metadata schema for the personalised ad platform (WP7b).

NoTube partner IRT has been in contact with ARD "Media Group", the company responsible for acquisition and planning of the commercials for the ARD (German public broadcastersbroadcaster). They are using an internal booking system with a very few descriptive metadata, such as genre, product name and a few technical metadata such as the format.

Media Group is part of EGTA, the "association of television and radio sales houses" which got together in 2009 to discuss about a common and more detailed metadata format for advertisement. IRT is in close contact with Jean-Pierre Evain from EBU. He is responsible for the development of the EBU/egta metadata schema, egtaMETA: a unique metadata exchange schema dedicated for the exchange of ads between ads agencies and broadcasters. A preliminary version has been provided to the project through Jean-Pierre and feedback from the project has been reflected to the development process of egtaMETA through IRT.

The use of the metadata schema for advertisement developed by EBU and egta, egtaMETA, in NoTube resulted in a mapping table of egtaMETA to TV-Anytime. This mapping table was provided to the metadata community at EBU.

The work done by NoTube with TV Anytime and egtaMETA is acknowledged by the EBU at http://tech.ebu.ch/MetadataEuropeanProjects.

- HbbTV

An initial study of what the NoTube use cases can mean for hbbTV was conducted internally by IRT during 2011. This study focused on what would already be possible to implement in hbbTV of the NoTube use cases and where new requirements and functionalities are to be found. As a result, the NoTube contributions from all use cases are going to be reflected in a scenario paper which will be contributed to the specification of HbbTV 2.0 at the end of 2011.

- Loudness Harmonisation

Audio levels in broadcasting have become increasingly diverse and different over the last decades. Despite clear guidelines and recommended practices, the general use of peak measurement in audio metering and the development of more and more sophisticated level processors have led to over-compression of audio signals with the questionable aim of being louder than the competitor. This situation has even been specified as “Loudness War”.

To achieve a harmonisation of loudness, standardised loudness meters are indispensible. In 2006, an international loudness algorithm standard could be established by ITU [1]. In 2008, the EBU (European Broadcasting Union) has established the projectinterest group P-LOUD with more than 100 members working on refinements of the ITU-R standard, such as the definition of target loudness level, short time/long time loudness or loudness range, and setting up EBU guidelines on loudness measurements.. Considering Europe, now in 2010, two years after inception of P-LOUD, the new levelling recommendations based on [1] which definitely will replace the existing recommendations are on the verge to be established. The intensive world widely observed and supported work of P-LOUD is almost finished accompanied by a bundle of publications [2][3][4][5][6][7].

NoTube partner IRT is involved in the activities of both ITU and EBU. IRT contributed an own algorithm to ITU’s working group on loudness, but was thus not present in the group as active member. However, IRT is closely observing ITU’s activities and IRT’s Christoph Dosch is even chairing the ITU-R Study Group 6 “Broadcasting Service”. IRT is also an active member in the project group P-LOUD and significantly contributed to the achievements of the group.

- FOAF Weighted Interests

This is an RDF vocabulary describing a way of extending the Friend Of A Friend (FOAF) RDF vocabulary to add levels and comparisons of interests in contexts. FOAF allows you to describe your interests as well as relationships with other people, and this takes things a step further in complexity of describing a profile, allowing orderings to be made over interests in date-and-time context. The

initial version was created in January 2010 from work done at the Vocamp in October 2009. In September 2010 a number of proposals for modelling weighted interests in FOAF has led to a combined proposal called Cognitive Characteristics Ontology (http://smiy.sourceforge.net/wi/spec/weightedinterests.html).

- Atom Activity Streams RDF mapping

This is an RDF Vocabulary written by Michele Minno, and Davide Palmisano, initially written in late 2009. The idea is that Atom activity streams could be roundtripped to and from RDF. In this period a suggestion has been made that the vocabulary could be hosted by W3C to give it a more stable URL, though not as part of any formal standards procedure.

- Buttons (an API for TV)

An initial sketch of the Buttons API was written up and informed a position paper on APIs for TV which was submitted to the W3C Interest Group on TV and the Web (see below).

- W3C Interest Group on TV and the Web

The W3C issued a summary of the 2nd workshop on Web and TV, which took place last February 2011 in Berlin. NoTube was present at this event and project representatives Libby Miller and Dan Brickley pushed for the use of semantic technology, especially Linked Data, in the TV space as well as for the provision of shared APIs for interacting with the TV playout device.
As the content of the report shows, the NoTube project has been ahead of its time in anticipating multi-modal, multi-device Web TV with a need for semantics in TV data and integration of social and personal data with TV. Hence, NoTube welcomes the W3C's interest to drive agreed specifications and models for the rapidly emerging Web TV world, with a goal for interoperability and open standards as opposed to today's fragmented landscape of proprietary platforms.
In particular, the W3C Web and TV interest group intends to develop a vision on metadata and a roadmap for convergence between W3C and TV industry developments. NoTube looks forward to continued involvement in these exciting developments, which could set the stage for a more open, and widely taken up, Web TV of the future.

3. Conclusion

This report has summarized the breadth of NoTube standardisation activities which took place during the project. We saw in particular continued involvement in and contribution to standards in both the broadcasting world (TV Anytime, within EBU) and the Web world (Web and TV IG, within W3C). This fits well with NoTubes positioning as research in the space joining together the worlds of Web and the TV. It is an interesting issue whether future Web-TV standards will have as their starting point the TV standards world (e.g. TV Anytime) or the Web standards world (e.g. HTML5). Of course complementary positioning can be found: the TV world will still look to bodies like the EBU for the metadata schema they will use to annotate their TV programming (TV Anytime, BMF etc) while the new generation of TV app developers may draw more from the Web standards world for in-device presentation and interaction (e.g. HTML5 + device specific APIs). The future stack of TV platforms will also tend to offer support for a mix of TV and Web standards, e.g. hbbTV supports HTML+CSS+JavaScript – known to Web developers – but adds TV specific APIs. The next generation of the hbbTV standard – hbbTV 2.0 – will hopefully incorporate insights from

NoTube in its definitions of data models, APIs and markup, to make future TVs more ready to support the personalised, smart and content specific functionalities envisioned in the NoTube use cases.

4. References

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[2] EBU Technical Recommendation R128: Loudness normalisation and permitted maximum level of audio signals
[3] EBU Technical Document 3341: Loudness Metering. 'EBU Mode' metering to supplement Loudness normalisation according to EBU Technical Document R128
[4] EBU Technical Document 3342: Loudness Range. A descriptor to supplement Loudness normalisation according to EBU Technical Recommendation R128
[5] EBU Technical Document 3343: Practical guidelines in accordance with EBU
[6] Technical Recommendation R128
[7] EBU Technical Document 3344: Practical guidelines for Distribution Systems in accordance with EBU Technical Recommendation R128