**NorDigT EPG / Event metadata subgroup**

**Working document A**

**Version 77**

Documents history:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Version | date | Meeting reference | Comments | Author |
| 01 | 10.12.15 | Telco meeting 10.12.15 |  | Peter M. |
| 02 | 20.01.16 | Telco meeting 14.01.16 |  | Peter M. |
| 03 | 15.02.16 | Telco meeting 15.02.16 |  | Peter M. |
| 04 | 29.02.16 | Telco meeting 29.02.16 |  | Peter M. |
| 05 | 14.03.16 | Telco meeting 14.03.16 |  | Peter M. |
| 06 | 11.04.16 | Telco meeting 11.04.16 |  | Peter M. |
| 07 | 25.04.16 | Telco meeting 25.04.16 |  | Peter M. |
| 08 | 26.05.16 | Telco meeting 26.05.16 |  | Peter M. |
| 09 | 10.06.16 | Telco meeting 10.06.16 |  | Peter M. |
| 10 | 20.06.16 | Telco meeting 20.06.16 |  | Peter M. |
| 11 | 30.06.16 | Telco meeting 30.06.16 |  | Peter M. |
| 12 | 10.08.16 | Telco meeting 10.08.16 |  | Peter M. |
| 13 | 05.09.16 | Telco meeting 05.09.16 |  | Peter M. |
| 14 | 19.09.16 | Telco meeting 19.09.16 |  | Peter M. |
| 15 | 04.10.16 | Telco meeting 04.10.16 |  | Peter M. |
| 16 | 10.10.16 | Telco meeting 10.10.16 |  | Peter M. |
| 17 | 14.10.16 | Telco meeting 14.10.16 |  | Peter M. |
| 18 | 08.11.16 | Meeting in Copenhagen 08.11.16 |  | Peter M. |
| 19 | 22.11.16 | Telco meeting 22.11.16 |  | Peter M. |
| 20 | 15.03.17 | Telco meeting 15.03.17 |  | Peter M. |
| 21 | 28.03.17 | Telco meeting 28.03.17 |  | Peter M. |
| 22 | 03.04.17 | Meeting in Oslo 03.04.17 |  | Peter M. |
| 23 | 18.04.17 | Telco meeting 18.04.17 |  | Peter M. |
| 24 | 05.05.17 | Telco meeting 05.05.17 |  | Peter M. |
| 25 | 18.05.17 | Meeting in Stockholm | Only group members list been updated | Peter M. |
| 26 | 07.06.17 | Telco meeting 07.06.17 |  | Peter M. |
| 27 | 15.06.17 | Telco meeting 15.06.17 |  | Peter M. |
| 28 | 30.06.17 | Telco meeting 30.06.17 |  | Peter M. |
| 29 | 14.08.17 | Telco meeting 14.08.17 |  | Peter M. |
| 30 | 28.08.17 | Telco meeting 28.08.17 | Workplan updated | Peter M. |
| 31 | 21.09.17 | Telco meeting 21.09.17 |  | Peter M. |
| 32 | 09.10.17 | Telco meeting 09.10.17 |  | Peter M. |
| 33 | 25.10.17 | Telco meeting 25.10.17 |  | Peter M. |
| 34 | 03.11.17 | Telco meeting 03.11.17 |  | Peter M. |
| 35 | 06.11.17 | Telco meeting 06.11.17 |  | Peter M. |
| 36 | 20.11.17 | Telco meeting 20.11.17 |  | Peter M. |
| 37 | 08.12.17 | Telco meeting 08.12.17 |  | Peter M. |
| 38 | 19.12.17 | Telco meeting 19.12.17 | Workplan updated | Peter M. |
| 39 | 31.01.18 | Telco meeting 31.01.18 |  | Peter M. |
| 40 | 14.02.18 | Telco meeting 14.02.18 |  | Peter M. |
| 41 | 26.02.18 | Telco meeting 26.02.18 |  | Peter M. |
| 42 | 19.03.18 | Telco meeting 19.02.18 |  | Peter M. |
| 43 | 09.04.18 | Telco meeting 09.04.18 |  | Peter M. |
| 44 | 11.05.18 | Telco meeting 11.05.18 |  | Peter M. |
| 45 | 26.06.18 | Telco meeting 26.06.18 |  | Peter M. |
| 46 | 27.08.18 | Telco meeting 26.06.18 | Members list updated | Peter M. |
| 47 | 11.09.18 | Telco meeting 11.09.18 |  | Peter M. |
| 48 | 27.09.18 | Telco meeting 27.09.18 |  | Peter M. |
| 49 | 11.10.18 | Telco meeting 11.10.18 | Members list updated | Peter M. |
| 50 | 19.10.18 | Telco meeting 19.10.18 |  | Peter M. |
| 51 | 25.10.18 | Telco meeting 25.10.18 |  | Peter M. |
| 52 | 20.11.18 | Telco meeting 20.11.18 |  | Peter M. |
| 53 | 21.12.18 | Telco meeting 13.12.18 | Added new items: 31, 32, 33 | Peter M. |
| 54 | 22.01.19 | Telco meeting 22.01.19 |  | Peter M. |
| 55 | 08.02.19 | Telco meeting 08.02.19 |  | Peter M. |
| 56 | 04.03.19 | Telco meeting 04.03.19 |  | Peter M. |
| 57 | 18.03.19 | Telco meeting 18.03.19 |  | Peter M. |
| 58 | 01.04.19 | Telco meeting 01.04.19 |  | Peter M. |
| 59 | 12.04.19 | Telco meeting 12.04.19 |  | Peter M. |
| 60 | 03.05.19 | Telco meeting 03.05.19 |  | Peter M. |
| 61 | 13.06.19 | Telco meeting 13.06.19 |  | Peter M. |
| 62 | 05.07.19 | Telco meeting 05.07.19 |  | Peter M. |
| 63 | 13.-09.19 | Telco meeting 13.09.19 |  | Peter M. |
| 64 | 26.09.19 | Telco meeting 26.09.19 |  | Peter M. |
| 65 | 11.10.19 | Telco meeting 11.10.19 |  | Peter M. |
| 66 | 25.10.19 | Telco meeting 25.10.19 |  | Peter M. |
| 67 | 08.11.19 | Telco meeting 08.11.19 |  | Peter M. |
| 68 | 29.11.19 | Telco meeting 29.11.19 | + update of members list | Peter M. |
| 69 | 10.12.19 | Telco meeting 10.12.19 |  | Peter M. |
| 70 | 13.01.20 | Telco meeting 13.01.20 |  | Peter M. |
| 71 | 10.02.20 | Telco meeting 02.02.20 |  | Peter M. |
| 72 | 10.03.20 | Telco meeting 10.03.20 |  | Peter M. |
| 73 | 24.03.20 | Telco meeting 24.03.20 |  | Peter M. |
| 74 | 15.04.20 | Telco meeting 15.04.20 |  | Peter M. |
| 75 | 28.04.20 | Telco meeting 28.04.20 |  | Peter M. |
| 76 | 12.05.20 | Telco meeting 12.05.20 |  | Peter M. |
| 77 | 27.05.20 | Telco meeting 27.05.20 |  | Peter M. |

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Content

1. Mandate
2. Background
3. Workplan
4. Actions and rapport
5. Functional requirements

1. **Mandate**

15.03.17: Mandate to be updated

Broadcaster and network operators handle todays many different data formats and delivery forms of metadata to meet the needs of EPG / Event information or different media platforms (broadcast TV, PC, mobile, Tablets ..) and various distribution networks (DTT, Sat, internet ..) which is an cost and source of error.

The group's task will be to examine and use the different file formats used today as input (for example ‘Public Schedule’ format) and to specify a NorDig Common EPG / Event interchange delivery file format, format based on existing standards.

1. **Background**

The work is set in initiate on the basis of an increased need for a common standard in this field. NorDig is interested to specify a Common EPG / Event interchange delivery file format, with the intension to be used widely between Nordic and Irish Content Providers and Media Operators/Network Providers and others. The goal of this Common EPG / Event interchange delivery file format it that is should be possible to use both for classical broadcast linear TV service as well for OTT streaming services, catch-up and other non-linear content.

This NorDig work will be handle inside a new NorDig Technical subgroups where external companies are welcome and work will be supported by the NorDigT API subgroup. NorDig T want to invite NorDig members and external (Nordic and Irish) broadcasters and operators (Viasat, Telia, SBS, TV4, ..) into this work to get better acceptance and understanding.

1. **Workplan** To be updated

Updated workplan 28.08.17:  
  
**Prepare the NorDig specification** **of common EPG/Event exchange file format** based on TV Anytime updated version, including XML Example files and Termslist.  
Then the updated version of the TVA specification is ready and published the specification of the NorDig metadata exchange format with reference to TVA and including xml Example files, Termslist and guidelines for implementation shall be ready for release.  
  
NorDig specification of common EPG/Event exchange file format will either be included in the NorDig IRD specification or be released as an independent recommendation document.  
This work will be done in the group and approved by NorDigT before release.

The documentation (guidelines, examplefiles and termslist) shall be tuned for all users in the whole EPG value chain.

**Examples files.** The mini TVA xml examples files for simple basic implementation have been made, the examples files including rights handling and on demand services will be made when the new TVA specification is ready.  
  
**NorDig implementation guidelines**. The guidelines for implementation of TVA to be prepared together with people with PS4 knowhow.   
  
**Guidelines for “last minutes” updates** of program start and changes (“last minutes” refers to shortly before but also afterwards for “correcting” catch-up segmenting) to be made.  
  
**Automatic mapping script** / function for handling data from Public Schedule to TV-Anytime and visa a versa to be made.  
  
**Workshop about Rights management** cross networks and platforms to help the stakeholder in the distribution chain to be arranged.  
It was proposed to make the workshop open to all interested not only NorDig members in order to promote the use and understanding of TVA.  
  
It would be useful to have both a distributor and a broadcaster who can tell about implementing and rights management using TVA.  
Alex would like to take the distributors part with examples from Stofa.  
It was suggested to contact SVT and ask if they will take the broadcaster part at the workshop.  
It was agreed that a workshop in November will be well-matched to the rest of the schedule.  
  
**How to maintain the NorDig EPG/Event exchange file format** and secure TV Anytime update its specification.  
It was agreed to recommend that the maintenance of the specification that will be taken care off in this NorDig group, who also will help interested parties with expert knowledge in relation to TVA implementation.   
  
**Offering help to implement TVA.** The NorDig EPG/Event metadata group to offering extra help to representatives in the whole EPG value chain to implement this NorDig TVA exchange format and to provide a kick off.

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07.06.17 updated.

Estimated work plan for 2017:  
Final draft specification of NorDig TVAnytime updates ready for next meeting 15th. June 2017.

Next steps are the ETIS work process:

- Inform the TVA community via the reflector and call for review and comments

- Edit the specification TS 102 822 3-1 to include the changes proposed in the schema

- Forward the document for editorial review by ETSI

- After editorial review is complete. ETSI start the ETSI formal review process.

- If no comments in ETSI, then the document is published

Taking into account the Summer holiday, a reasonable target date for publication will be end of September 2017.

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19.12.2017 update

* Complete the NorDig specification of common EPG/Event exchange file format, draft.
* Final draft specification to be approved in NorDigT and Excom for release.
* It is the intention to have the specification, implementation guidelines and related documents ready for approval latest at Excom meeting 8th. March.
* Follow-up NorDig metadata workshop in the beginning of next year, when the implementation is in process at the different companies.

1. **Actions and rapport**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Action** | **Title** | **Person** | **Status** | **Comments** |
| 1 | Draft requirement list | John M. | Done |  |
| 2 | Information about “Public Schedule” / PS | John M. | Done |  |
| 3 | NRK metadata solution | Randi | Done |  |
| 4 | Metadata standards in DTG and other | Peter M. | Done |  |
| 5 | Unique program id | TBD | Done |  |
| 6 | List of Terms and EPG requirements | Randi | Done |  |
| 7 | Parent rating | TBD | Done |  |
| 8 | XMLTV | Peter M. | Done |  |
| 9 | EBUCore | Peter M | Done |  |
| 10 | Evaluation document | Peter M | Done |  |
| 11 | ” Last minutes update” | Peter / Randi | Done |  |
| 12 | TV stations use of exchange format in the Nordic countries and Ireland | Peter M | Done |  |
| 13 | Mapping structure TVA / PS4 | John | Closed |  |
| 14 | Rights management requirements | Alex | Done |  |
| 15 | TVAnytime updates | Peter | Done |  |
| 16 | TV Anytime xml schema | Randi | Done |  |
| 17 | NorDig specification exchange format | Peter | Done |  |
| 18 | Guidelines / user guide | Peter | Done |  |
| 19 | Maintain EPG/Event exchange file format | Peter | Done |  |
| 20 | Workshop about Rights management | Peter | Done |  |
| 21 | Promote the exchange format | Peter | Done |  |
| 22 | “Public Schedule” migrate to TVA? | Peter | Done |  |
| 23 | TVA License | Jean-Pierre | Done |  |
| 24 | DeviceTypeList | Alex | Done |  |
| 25 | NorDig TVA Workshop no. 2. | Peter | Done |  |
| 26 | Comments on NorDig metadata spec. v. 1.0 | Peter | Done |  |
| 27 | Functional requirements | Peter | Done |  |
| 28 | TVAnytime specification v V1.10.1 updates. | Peter | Done | See item 35. |
| 29 | Follow-up NorDig TVA metadata workshop November 26, 2018 |  | Done |  |
| 30 | NorDig TVA metadata spec. in IRD spec. v3.1 | Peter | Done |  |
| 31 | Program ID’s | Peter | Closed | - It was agreed to set the issue on hold. |
| 32 | Genre | Peter M | In progress | There is a use of different genre (or non) standards and there is need for a standard translating of genre between the Nordic languages.  Some broadcasters are mixing description of content and format in genre, (e.g. crime series)  - It was agreed work on a translation of genres between Nordic language and English, and to develop guidelines for use of genre to support the whole distributions chain.  To be discussed at next meeting.  22.01.19  It was agreed to start up the work with translation of genres between Nordic language and English, and developing guidelines and recommendations for use of genre to support the whole distributions chain. Peter/ start up the work with translation of genres between Nordic language and English.  Many broadcasters do not describe if a program is a rerun and description of series are not following standards which two issues causes problems for the distributor and EPG suppliers.  There is a need for more guidelines about how to handle series and rerun in TVA metadata.  - The issue to be discussed at the next meeting.  08.02.19  Are looking at mapping between DVB Core (used in Nordif) and TVA and will see how to use “translate” genres. Peter/ start up the work with translation of genres between Nordic language and English.  04.03.19  Are will look at a mapping / transformation between EBU Core (used in Nordif) and TV-Anytime.  Jean-Pierre will help Are with that task, he will contact Are.  18.03.19  Are have talk with Jean-Pierre about making an EBU recommendations paper on mapping EBU Core and TVA genre list. This proposal is on the agenda at next EBU MIN-IA Group meeting 20th. March in Bergen.  01.04.19  Are informed that the EBU MIM-AI meeting last week in Bergen, agreed to continue the work on the EBUCore -> TV-Anytime mapping.  12.04.19  Are/ to make scope for the work with mapping EBUCore with TVA have to be made to start the process.  Genre list - translation of genres between Nordic language and English.  Randi have made a draft, for some time ago, with translation of the classification scheme including genre. The document to be sent to NorDig members to get input to translate the wording into the different languages.  03.05.19  Genre list - translation of genres between Nordic language and English.  Randi have sent genre list with translation of the classification scheme including genre with Norwegian wording. Ole have sent the Genre list draft to the TDC intern tv guide group for input on Danish wording.  Peter/ to send draft Genre list document will be sent for input to YLE for Finish wording and SVT for Swedish wording of genres.  Are / make scope for the work with mapping EBUCore with TVA, for presentation on the coming workshop.  13.06.19  Randi and Ole have has drafted the NorDig genre translation list for Norwegian and Danish.  AP/ Peter to send the draft to SVT and YLE for Swedish and Finish input / wording.  05.07.19  Draft doc. with translation of genres between Nordic language and English have been sent to SVT and YLE for input. YLE replied that they are not yet ready to implement TVA and therefore do not have resources for making the Finnish translation. SVT have not yet replied.  Peter have also sent the document to John Berger and asked if June can help with translation to Swedish and Finnish. Awaiting reply.  13.09.19  No reply yet. AP/ Peter to follow up.  26.09.19  John Berger have answered that he will make the Swedish translation. Peter are in contact with Kim, if YLE can make the translation to Finnish.  11.10.19  John Berger have sent a Swedish translation, thank you to him.  Peter/ to find a solution for the Finnish translation.  Genrelist to be discussed at next meeting.  25.10.19  Peter/ to find a solution for the Finnish translation.  08.11.19  Joha Joki, Sofiadigital are working on to get the Finnish translation.  29.11.19  Subject postponed to next meeting.  10.12.19  Juha have send information on where found some translation to Finnish.  Daniel have send to Peter a category / genre list from Simple tv including Finnish covering good a part of the need words to be translated.  - Are will contact Kim from YLE if he can help with translation of the outstanding words.  AP/ Peter to make a draft of the genre list ready for the workshop.  13.01.20  It was agreed the list shall only include information and links about where to find metadata from broadcasters who have implemented NorDig TVA or are in process with that, to promote the standard.  AP/ Peter to make draft for next meeting.  10.02.20  Peter M. presented draft with limited Finnish translations.  AP/ Peter M. to update draft with DVB genre and English TVA genre wording and send out for comments.  10.03.20  Draft v. 003 have been send to the group for comments, incl. English TVA genre wording, translation to Finnish and DVB genre list.  If no major changes the Genre list will be released after next group meeting.  AP/ All, to review draft v. 003 and send comments to Peter M.  24.03.20  - No time to review draft003 at the meeting.  AP/ All, to review Genre list draft v. 003 and send comments to Peter M., if no major changes to the Genre list it will be released after next group meeting.  15.04.20  - The draft003 was reviewed at the meeting and following changes and updates was agreed:  Column A + H + I must be removed since is internal data from NRK which for historical reasons is still in the excel sheet as they have been used in the work process.  In column D “Norwegian-TVA genre” the CS id numbers before the word must be removed.  The document needs a header explanatory what it is and references.  If no major changes to the Genre list it will be released after next group meeting.  AP/ Peter M. to make draft004 including the agreed updates and changes.  AP/ All, to review Genre list draft v. 004 and send comments to Peter M. before next meeting.  28.04.20  Genre List Draft 004 was review at the meeting and there was general satisfaction with draft004. Comments from Randi: include the xml-import in an sheet named ContentCS-(XML), delete Sheet 1 with NRK ContentCS, Sheet 2 change name to ContentCS Translation and Sheet 1, Line 2, cell B2 to F2: change from “TVA genre” to “ContentCS”.  There must be made an introduction page about the Genre list before release. The proposed changes were agreed.  AP/ Peter M. to update the document and include the proposed changes in draft005.  AP/ Peter M. to ask Per Tullstedt if we can release the NorDig Genre list (to be include in the implementation package) at NorDig website or it must be approved at next NorDigT meeting before release.  12.05.20  Draft 005 and Introduction document v.1 was discussed, introduction text to be included in the Excel document.  NorDig Genre list draft are nearly complete, it was agreed to send it to NorDigT for approval at NorDigT meeting 26th. May, last correction to be done before be done over mail.  AP/ Peter M. to update NorDig Genre list to draft006 including introduction text and send to the group.  AP/ All, to make final review and send comment to Peter M. before 18th. May.  27.05.20  Peter M. have presented “NorDig Genre list draft006” at NorDigT meeting and the specification was approved for release at NorDig website with minor updates.  Need at extra check of translation to Swedish and Finnish language and DVB-C genre list have to be in English.  AP/ Peter M. to update NorDig Genre list for final version. |
| 33 | JSON |  | Closed | Translation NorDig TVA XML schemas to JSON:  18.03.19  It was decided not to do further on the subject since if developers in connection with implementation of TVA wishes to use JSON, they will make necessary form translations by them self.  The task is closed for now, but if we get request on this subject in the future it will of course be open again for discussion. |
| 34 | Follow-up NorDig TVA metadata workshop May 16, 2019 |  | Closed | See new Item 39. |
| 35 | Update of NorDig Metadata Exchange specification v.1.3, Guidelines and example files | Randi | In progress | 04.03.19  Randi proposed the Termslist to be updated.  It was agreed to start the work with updating the Guidelines, example files and all related documents, so we can release the new versions short time after the release of the updated TVA specification. Release of the updated TVA specification is expected in the end of February month.  18.03.19  The work with updating Guidelines and all related documents will startup when ETSI have released the updated TVA specification, (expected in few weeks.  01.04.19  Randi have start working on updating NorDig TVA metadata guidelines, related documents and example files.  Peter/ to ask NorDigT if they want to release the updated NorDig metadata specification and guidelines at the same time as the new NorDig Testplan and updated IRD specification.  12.04.19  Randi have started the work and expect to have a draft for next meeting. Peter will update the NorDig TVA metadata specification, draft ready for next meeting.  NorDigT have been asked about release data for updated NorDig metadata specification and guidelines if it shall be simultaneously with release of the updated Test specification and IRD specification.  It is agreed that it is better to release NorDig metadata specification and guidelines independent of the other releases to get the necessary attention.  Plan is to have the updated NorDig metadata specification and guidelines released before the Workshop in Bergen 16th. May, it means that it has to be approved at the coming NorDigT meeting 14th. May.  03.05.19  Randi have updated NorDig TVA metadata guidelines, related documents and example files. Peter have updated the NorDig metadata specification. All document has been sent to the group for comments.  Terms list need to be updated and included in the NorDig TVA metadata guidelines package.  Peter/ to send updated NorDig TVA metadata guidelines, related documents and example files and NorDig metadata specification to the NorDigT group for approval.  13.06.19  AP/ Randi to test the updated xsd in the updated TVA specification against xml and update the guidelines.  05.07.19  To be done.  13.09.19  Randi have updated example files. Randi/ to update NorDig metadata specification, guidelines and example files according to the latest update of the TVA specification.  To be approved at next meeting.  26.09.19  Randi/ new example file with OnDemand to be added to the guidelines package and send updated NorDig TVA metadata specification, guidelines and example files to Peter.  Peter/ send updated NorDig TVA metadata specification, guidelines and example files to the group for comments.  11.10.19  Randi/ to update the Ondemand example file.  Joakim and Mads/ to review the Ondemand example file.  Peter/ to send updated NorDig TVA metadata specification v.1.3 final draft, guidelines and example files to the NorDigT group for approval at next NorDigT meeting 17th. October.  Peter/ to ask NorDigT group if they can allow us to in the future update’s guidelines and example files and without approval in NorDigT before release at the website.  25.10.19  Updated NorDig TVA metadata specification v.1.3, guidelines and example files approved at NorDigT meeting 17th. October and released at NorDig website 22th. October.  Per Tullstedt was asked if we can make minor updates of guidelines and example files without the approval process in NorDigT before release at the website.  The answer is ok, on condition that the NorDigT members will be informed by email when updates / changes are uploaded at NorDig website.  Ondemand example file: Comment from Peter W. to the OnDemand example file was discussed at the meeting, including 3 specific features used in TDC:  "Scrupping" - whether you have rights to rewind the content.  "StartOver" - whether there are rights to display the program.  "StreamingAwayFromHomeAdresse" - whether there are rights to view the material other than the home address.  Randi, Are and Mads/ will look at the items discussed and questions in the comment from TDC and make inputs before for next meeting.  08.11.19  “StartOver" - whether you have rights to rewind the content - the feature is covered in the TVA VOD spec.  "Scrupping" - whether there are rights to display the program – the feature are covered in tva:SegmentInformation isPrintable="true|false".  AP/ Ole will come with more cases to find best solution using TVA for "StreamingAwayFromHomeAdresse.  AP/ Randi will check what is the best solution in TVA for the "StartOver" feature.  29.11.19  "StreamingAwayFromHomeAdresse”. Ole could not attend the meeting due to illness.  Cases and solutions were discussed at the meeting; conclusion was that there is a need to find a solution in TVA that can support this rights management feature and the subject to be discussed at the Workshop.  “StartOver". Randi could not attend the meeting due to illness.  The challenge is that there is a need to handle “start over” right both in VOD and scheduled / live events.  - Solutions was discussed at the meeting; conclusion was that there is a need for a description in the Guidelines for both stages.  10.12.19  Randi have made a proposal on how to cover the needs in TVA for the "StartOver" feature, where it is possible to handle how long time it shall be possible to use “startover”.  - The proposal it to make a new element in ScheduleEventType. AP/ Randi to send the proposal Peter so he can sendt it with the minutes of the meeting for comments.  13.01.20  The proposal was presented at the workshop in December, where found to be a good solution.  - Update of the TVA specification with “ScheduleEventType”to be discussed at next meeting.  10.02.20  AP/ Peter W. TDC - to comments on the proposed solution - Update of the TVA specification with “ScheduleEventType” - if the solution covers the TDC needs.  10.03.20  No input.  24.03.20  No input.  15.04.20  Waiting for feedback from TDC on proposed solution if the solution covers there’s needs.  - No feedback yet, it was agreed to set the task on standby until we get feedback from TDC since they have asked for a solution for “StartOver”.  28.04.20  No feedback yet, it was agreed to set the task on standby.  12.05.20  - The solution proposed by Randi was discussed at the meeting and conclusion was that it could be possible to cover the needs by using the current TVA facilities working with time periods for a Scheduled or Ondemand Event.  AP/ Peter W. to describe scenario for “StartOver”.  AP/ Randi to look at a TVA solution for the “StartOver” scenario.  27.05.20  Since Randi was unable to attend the meeting due to illness and Peter W. was unable to attend the meeting the task was postponed to next meeting. |
| 36 | NorDig TVA for audience measurement | Peter | In progress | 05.07.19  Using NorDig TVA as basis for audience measurement (TVOV - tv monitoring) across media platforms and devises, online and VOD.  As follow up from the workshop Peter have contacted TV2 Norge about possible cooperation on TVOV in the project TV2 Norge have with Kantar.  Audience measurement (TVOV - tv monitoring) is also of very high priority at TDC / YouSee.  - It was agreed to have focus on audience measurement using TVA in the workplan for the coming autumn.  13.09.19  No reply from TV2 Norge yet.  Peter/ to contact TV2 Norge and Gallup / Kantar Denmark about using NorDig TVA as basis for audience measurement and possible cooperation.  26.09.19  Ragnar Sørum, TV2 Norge have answered that our request will discussed at the TVOV broadcaster consortium steering group meeting Friday 27 September, and he expect that they are positive for a cooperation.  11.10.19  Peter/ contacted TV2 Norge about answer on our request about possible cooperation between NorDig and the consortium of TV2 Norge, Gallup / Kantar and other broadcasters in Norway working with a common way of handling audience measurement across platforms OD and online.  25.10.19  Kristian Tolonen, chairman MOC have has responded positively and welcomed our request for cooperation about metadata in the TVOV project.  Are informed about workshop in the TVOV project 4th. November to specify needs and actions, where Are and Joakim will participate.  Are and Joakim / response from workshop in the TVOV project as input for discussion at next meeting about NorDig TVA as basis for audience measurement.  08.11.19  Are reported from the TVOV project workshop 4th. November: ongoing process to specify the requirement and expect he can present the specification on the NorDig TVA workshop. Focus is on to have unique program ids cross platforms and the updating quality of EPG metadata.  29.11.19  Are to present the subject at the workshop.  13.01.20  AP/ Peter to contact Are and Kantar Norway to make a workplan and specifying what have to be done and when.  10.02.20  Are presented status on the work in the TVOV project. There a planned project meeting this week to define metadata requirements in phases. Randi will participate in the meeting.  AP/ Are update on the project and proposal for specification of metadata need for next meeting.  10.03.20  Are: due to reorganization in TV2 Norge there have not been much activists in the project, but there are now planned project meeting with Kantar in the next weeks to define metadata requirements and workplan.  Focal points are unique program id and specification of which metadata to use for analysis purposes.  AP/ Are, update on the project and proposal for specification of metadata need for next meeting.  24.03.20  Are made an update on the project, there is a planning meeting at Kantar 25.03.2020, to discuss proposal for specification of metadata and other.  AP/ Are to send an update on the project before for next NorDig meeting.  15.04.20  - Are made an update on the project: There have been planning meeting in the TVOV group at Kantar 25.03.2020. Focus is unique program / content id, service type (live or Ondemand), genre and synopsis / description. First step focus is on regular tv program, next step to include promotion content, “last minute update” is not critical, since updates will be made after broadcast and is not time critical.  AP/ Joakim, to send Kantar metadata specification of items to be covered by TVA to Randi.  AP/ Randi to investigate how we can meet the requirements with TVA.  28.04.20  Randi have investigated how we can meet the Kantar metadata requirements using NorDig TVA and have sent proposal “TVOVEventTypeCS.xml to Joakim".  Main needs to cover is: CRID, Channel, and Timestamp per program. Kantar cannot handler CRID with more than 10 characters, that limitation in characters is not working in TVA so they need to translate the CRIDs.  AP/ Joakim to review proposal from Randi before next meeting.  12.05.20 Item postponed to next group meeting since Joakim was unable to attending today´s the meeting.  AP/ Joakim to review proposal from Randi on how Kantar metadata needs can be covered by TVA, for next meeting  27.05.20  Joakim have reviewed the proposal from Randi and find that all metadata need are covered.  Since Randi was unable to attend the meeting due to illness the task was postponed to next meeting. |
| 37 | NorDig TVA as standard for export of metadata for SVOD and more | Peter | In progress | 25.10.19  The issue is covered by the updated Ondemand example file. Item 37 is closed. |
| 38 | Personalization and exchange of recommendations data. | Peter | Standby | 05.07.19  Using NorDig TVA for personalization and exchange of recommendations data.  Personalization and recommendation are typical for company owned platforms / products like TDC services for TDC costumers or NRK users, and therefore it must be defined if there is a need for exchange of this data between companies and organizations.  AP/ Randi will look at personalization in the TVA spec.  13.09.19 It was not found as high priority to work with in the NorDig group now, therefore it was agreed to set the issue on standby. |
| 39 | Follow-up NorDig TVA metadata workshop December 16, 2019 | Peter | Closed | 10.03.20  This item is closed – see new item 46 for NorDig TVA metadata workshop in Stockholm 15th. May 2020. |
| 40 | Distribution / making metadata available to distributors and others. | Peter | Standby | 11.10.19 To find a common solution for making metadata available which can support fast updates and large amount of data that VOD programs require.  It was agreed at last meeting that it is now relevant for the group to work with this issue, to find recommended solutions.  Randi informed that Universum in Norway have a relevant project where they are working with a push model for metadata.  Peter have contacted Kjertil at Universum and he would very much like to tell about their project at an upcoming group meeting, Peter will be trying to find dates that can match for him.  25.10.19  Kjertil will come back to when he has the possibility to tell about the project. - It was agreed to have the subject on the Workshop agenda.  08.11.19  No comments.  29.11.19  No comments.  10.12.19  AP/ Peter to contact Kjertil about when he can make a presentation of the project.  13.01.20  Universum have changed to Inflowmedia.tv AP/ Peter to contact Kjertil about when / if he can make a presentation of the metadata distribution project.  10.02.20  Solutions for distribution of metadata was discussed including opportunities and challenges in Push and Pull, it was agreed to give the item priority.  AP/ Peter M. to contact Kjertil from InFlow Media former Universum about their project with metadata distribution.  AP/ All, workplan to be discussed at next meeting  10.03.20  Kjertil from InFlow Media (former Universum) made a presentation of their project “Live Metadata” about metadata distribution and “last minute updated”.  The project have focus on providing synchronized metadata – live updated “now & next” (p/f) program information including change of broadcast time and program rescheduling.  Solutions for distribution of metadata was discussed including opportunities and challenges in Push and Pull solutions and how to handle change of time notification.  It was agreed that metadata distribution and “last minute update” shall have focus in the group to develop standard solutions or / and recommendations.  AP/ workplan to be discussed at next meeting  24.03.20  Postponed to next meeting.  15.04.20  Workplan for the task was discussed, and it was agreed to ask the distributors and EPG metadata providers about their wishes for a recommended solution for distribution of metadata including notification for updates.  AP/ Peter to contact the distributors and EPG metadata providers for input.  28.04.20  Peter have contacted the distributors and EPG metadata providers for input but no feedback except from Simply tv who can handle any format and do so today.  - It was agreed set the item on standby until there is a desire and interest for a recommended solution from the distributors and other how are using the metadata.  12.05.20 No comments |
| 41 | List of where to find EPG/Event metadata from content providers on NorDig website. | Peter | In progress | 11.10.19  Today it can be a problem to find the right addresses (URL) for metadata from a content provider on live and OnDemand, therefore it was discussed if it possible to make a list on NorDig website.  Peter talked with Per Tullstedt about the possibilities of having a list of links to content providers program metadata on the NorDig website, and it is a possibility as long it’s only a service and NorDig don’t have any responsibility.  Peter will make a draft to next meeting.  25.10.19  Peter are working on where on the NorDig website to place the list with links to EPG metadata from the content providers.  08.11.19  List of where to find EPG/Event metadata from content providers including links, will be made as a document and not in HTML at a page on the website to avoid any rights problems related to linking directly to the broadcaster’s website.  The document will be placed on the page with NorDig specifications under Metadata specifications.  The solutions were agreed.  AP/ all broadcasters to send information on EPG metadata including links to feeds.  29.11.19  There is until now only received information from TV2 Norge and NRK.  AP/ all broadcasters to send information on EPG metadata including links to feeds to Peter.  10.12.19  Daniel offered to send the information they have on how to get access to EPG metadata from the largest broadcasters in the Nordic region, so we can make a draft list which can be sent for comment by broadcasters.  AP/ Daniel to send metadata info about where to find EPG metadata from the major broadcasters to Peter.  AP/ Peter to make a draft document for comments.  13.01.20  It was agreed that the DVB genre list have to be included in the document to have all relevant references (DVB genre list is used in SI - EIT Schedule and p/f for tv broadcast networks).  AP/ Peter to make a draft for next meeting including DVB genre list and the limited Finnish translations.  10.02.20  It was agreed the document shall only include information and links about where to find metadata from broadcasters and distributors who have implemented or are in process with implementation of NorDig TVA.  AP/ draft document to be updated with information from broadcasters and distributors.  10.03.20  List of where to find EPG/Event metadata in NorDig TVA format.  Peter M. have sent updated document to broadcasters and distributors for input, but still need feedback from a major part.  AP/ Peter M. will follow up to get the needed information.  24.03.20  Peter M. have sent updated document to broadcasters and distributors for input, but still need feedback from a major part.  AP/ Peter M. will follow up to get the needed information.  15.04.20  Updated document sent to broadcasters and distributors for input, but still need feedback from some of the broadcasters.  AP/ Peter M. will follow up to get the needed information.  28.04.20  Updated document was sent to broadcasters and distributors for input, Peter S. have sent information for SVT, but still need feedback from some of the broadcasters.  AP/ Peter M, to contact broadcasters to get the last input to “List of NorDig EPG/Event metadata implemented”.  12.05.20  Updated document was sent to broadcasters and distributors to get the missing input.  AP/ Peter W. to send information from TDC to Peter. AP/ Randi to contact GET for information. AP/ Peter M. to contact Red Bee Media and Teracom for information.  27.05.20  Still need input from TDC, GET, Teracom and Red Bee.  Mads will update information from DR.  AP/ Randi to contact GET for information.  AP/ Peter M. to contact TDC, Red Bee media and Teracom for information. |
| 42 | Handling copyright for program related still images / pictures | TBD | In progress | 13.01.20  Handling copyright for program related still images / pictures (ex. rights for using a program related picture in the EPG, if only for a specific broadcast channel or generic for the program on all channels and on-demand).  AP/ TDC, Simple TV and the TVOV project to define used cases and needs as basis for speciation of a metadata solution.  10.03.20  TV2 Danmark are working a solution for handling copyright for program related still images / pictures.  AP/ Daniel to contact TV2 Danmark for next meeting.  24.03.20  No comments  15.04.20  No comments  28.04.20  Pictures / images are linked to a program in TVA. If program related pictures and images to be used across channels it is a copyright issue.  12.05.20 No comments  27.05.20 Postponed to next meeting |
| 43 | Extended recommendations about “last minute update” | Peter |  | 10.02.20 Extended recommendations about “last minute update” for correct program start / stop data and changes program schedules.  AP/ Peter M. to see how we can update the “last minute update” guidelines document.  10.03.20  No input  24.03.20  To be done  15.04.20  No comments  28.04.20  AP/ Peter to make a draft for updates to the “last minute update” guidelines document for next meeting.  12.05.20 Postponed to next meeting.  27.05.20 Postponed to next meeting. |
| 44 | Recommendations for broadcasters how to provide metadata | TBD | Closed | 10.02.20 Recommendations for broadcasters how to provide metadata (how to fill in data fields and what not to do) to ensure correct and usable metadata distribution and EPG presentation. ------------------ 28.04.20  It was agreed to close this item since the items are covered in item 45. |
| 45 | Benefit for the broadcaster / content provider of making better, more rich and correct metadata. | TBD |  | 10.02.20 Optionally to provide a document about the benefit for the broadcaster / content provider of making better, more rich and correct metadata.  AP/ prepare a document that describes the consequences it can have if the metadata for a program is not correct, with input from TDC, Simple tv, Kantar and other.  10.03.20  To be included in the workshop program.  24.03.20  Included in the Workshop program.  15.04.20  Now included in preliminary Workshop program  28.04.20  No comments. |
| 46 | NorDig TVA metadata Workshop at SVT in Stockholm 15th. May 2020. |  |  | Next NorDig TVA metadata Workshop will be held at SVT in Stockholm 15th May 2020. AAP/ Peter M. to send out preliminary invitation to the Workshop at SVT.  10.03.20  Peter M. have sent out a preliminary invitation to the Workshop at SVT, there have already come a number of registrations for the Workshop.  Program for the workshop to be discussed at the next meeting, the plan is to send out program for the workshop very soon.  AP/ Peter M. - to make a draft program for the Workshop before next meeting.  24.03.20  Because of the Corona crisis it was decided to postpone Workshop to October.  It was agreed to postpone the NorDig TVA metadata Workshop at SVT in Stockholm to 2th. October 2020.  Peter M. have sent a draft program for the Workshop to the group for comments.  - The draft program was discussed and agreed at the meeting and is was also agreed to prolong the Workshop to 17.00 to get more time for questions and discussions.  AP/ Peter M. to send out the preliminary program with information about that the Workshop is postponed and ask for input and wishes to the program.  15.04.20  Preliminary program has been sent out with information about that the Workshop is postponed and request for input and wishes to the program.  - No feedback yet, but there are there plenty of time before deadline for registration for participation on the workshop, a reminder will be sent out later.  28.04.20 No comments. |

1. **Functional requirements**

This list describes requirements for a B2B Common EPG / Event interchange delivery file format.

Requirement list, updated 11.05.18

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Item | Requirement | Description | Now | 1 to 3 year | future |
| 1 | Push/pull file format | The metadata format shall support push / pull, and xml-based file formats that can be either pushed or provided for pull. | X |  |  |
| 2 | API | The format shall support a possible API |  | X |  |
| 3 | Trigger for last minute update | Shall support a possible trigger to update program start and duration time in the EPG. (program id + start time + duration) | X |  |  |
| 4 | Global identifier | A way to uniquely identify programs through a shared id number. The format shall support global unique program id from www.isan.org, www. eidr.org or other. | X |  |  |
| 5 | EPG data | Shall support NorDig EPG data requirements including specified optional data (PVR and more) | X |  |  |

Notes to the classification in the requirement list:

“Now” have to be included from day 1.

“1 to 3 year” have to be in plan not later than 3 years ahead

“Future” requirement for more than 3 years ahead

**Preliminary conclusion and requirements to a NorDig metadata exchange format:**

* To be either a format / standard already used by the parties in the distribution chain / stakeholders or a format that is very simple to map up to
* It should not require significant changes in internal systems for the companies and it should be an immediate benefit for all stakeholders to use

**Key issues and areas which require more work:**

* Requirement for management of program rights for live, catch up, On demand
* XMLTV to be looked more into
* The functional requirement list for a NorDig common EPG/ Event metadata format / interchange deliverer file format has to be developed and evaluated in more detail.
* There shall be worked out a comparison and evaluation of the existing standards and formats based on the requirements list / specification.

1. **. Existing metadata formats**

Information and links to relevant existing metadata formats.

**Public Schedule / PS:**

Metadata exchange format used by broadcasters, distributors and service providers in Sweden.

John Brander, June 11.02.16: The current list of companies having implemented PS is (that I know of)

Broadcasters:  
TV4, C More, SBS Discovery (Currently only the former SBS-channels), SVT, Turner Nordics and Baltics, Horse1, MTV3, Cirkus.

Distributors:  
TeliaSonera, TeracomBoxer, Canal Digital, Katsomo (work in progress)

Metadata, Service and Platform providers:  
June, Universum, TT, Bebanjo

Current development of PS:

The latest release of Public Schedule is 4.1.1 as provided on the GitHub:

<https://github.com/june-ab/public-schedule4/releases>

There is one pending 4.1.2 version that will add download (offline viewing) rights specification.  
<http://www.june.se/en/public-schedule>

**BMF:**

BMF metadata exchange format from IRT used by German Public service broadcasters and other.  
The format includes broadcast, online and non linier requirements.  
<https://www.irt.de/en/activities/production/bmf.html>

The XML Schema of BMF 2.0 can be downloaded from http://bmf.irt.de/en for usage at free cost.

IRT, Andreas Ebner, answers to questions from Peter M.:

BMF is a tool box. For the support of use cases parts of BMF will be used to build use case specific XML-Schema.

BMF is object based and interoperable with EBU CCDM, Dublin Core and a lot of other object based models.

BMF supports editorial process from planning to realization, program planning, production, acquisition, archiving, resource management, event planning and, and …

All of this, including the description of content, is support for TV, Radio, online and on demand.

Out of that rights management is supported as well as and the support of a unique program ID is a must. Can handle more than one unique program ID, which enables a mapping.

**EBUCore:**

EBU standard metadata exchange format.

EBUCore is an open metadata standard developed by EBU expert groups.

EBUCore are used in the Nordic countries in Nordif3, the program exchange system used by the Nordic public service broadcasters. NRK are using EBUCore together with TVAnytime and Glue (NRK own standard) and TV2 Norway are using EBUCore including handing commercials.   
A group of broadcasters and platform operators in Belgium and France are using EBUCore internally and for metadata exchange.

EBUCore are based on the CCDM object model. It does support TVAnytime CRIDS and master / sub programs and series. EBUCore can support NorDig EPG requirements.

More information: <https://tech.ebu.ch/MetadataEbuCore>

Download specification: <https://tech.ebu.ch/docs/tech/tech3293.pdf>

**DR (Danish Broadcast Cooperation / Danmarks radio):**

DR EPG / Event information XML exchange formats and links to respective program information for live digital and print media.

Live updated metadata for retransmission, EPG partners and other:  
<http://www.dr.dk/Tjenester/epglive/epg.DR1.drxml?dato=2016-02-08>

and with od-kill-date to UBOD partners when they must retransmit multiple programs with varying rights lengths:  
<http://www.dr.dk/Tjenester/epglive/epg.retrans.DR1.drxml?dato=2016-02-08>

Metadata for print media:

<http://www.dr.dk/programoversigttiltryk/>

Example: <http://www.dr.dk/programoversigttiltryk/Sendeplaner/xmltv/DR1/2016_6/DR1_2016-02-08_mandag.xml>

Example: <http://www.dr.dk/programoversigttiltryk/Sendeplaner/dr-epg-xml/DR1/2016_6/DR1_2016-02-08_mandag.xml>

**CableLabs:**

CableLabs VOD content specification v. 1.1 used by some distributors for VOD content.

<https://en.wikipedia.org/wiki/CableLabs>

**XMLTV**:

XMLTV is an open source XML standard designed for sharing TV program information <http://wiki.xmltv.org/index.php/XMLTVFormat>

<http://wiki.xmltv.org/index.php/Main_Page>

<http://xmltv.cvs.sourceforge.net/viewvc/xmltv/xmltv/xmltv.dtd>

The standard xml format, XMLTV are widely used as EPG exchange format by EPG / TV guide providers, it is an open standard made for consumer receivers and web services, it is not designed to B2B metadata exchange between broadcaster and distributor, but it possible to add the necessary metadata.

XMLTV does not have an underlying engine but is excluded a description and exchange format, XMLTV are as EPG / program information exchange format a de facto standard on web for web services and TV program viewing.

Ritzau the leading news agency in Denmark and the largest provider of TV program information has recently developed an XML metadata exchange format based on XMLTV.

Ritzau like to share their specification with NorDig and other for no cost.

**TVAnytime**:

TV Anytime is a set of specifications for the controlled delivery of multimedia content to a user's personal device (Personal Video Recorder (PVR). It seeks to exploit the evolution in convenient, high capacity storage of digital information to provide consumers with a highly personalized TV experience. Users will have access to content from a wide variety of sources, tailored to their needs and personal preferences.

NorDig PVR specification are based on TVAnytime.

ETSI documentation:

<http://www.etsi.org/technologies-clusters/technologies/broadcast/tv-anytime>

Metadata for Series / Season:

<http://www.etsi.org/deliver/etsi_ts/102800_102899/1028220301/01.09.02_60/ts_1028220301v010902p.pdf>

Jean-Pierre Evian, EBU is the ETSI rapporteur for TV-Anytime.

New developments and further information is handled by mailing to Jean-Pierre Evain, Principal Project Manager EBU, [evain@ebu.ch](mailto:evain@ebu.ch)

**TVAnytime updated version including NorDig requirements:**

ETSI had 21th. September 2017 approved (with no comments) the TV-Anytime new version updated with the NorDig requirements including program rights, and published it on the ETSI website. <http://www.etsi.org/deliver/etsi_ts/102800_102899/1028220301/01.10.01_60/ts_1028220301v011001p.pdf>

The EBU TVAnytime website updated with information about the new TVAnytime version. Here you also find links to the Specification, Schemas & Classification Schemes.

<https://tech.ebu.ch/tvanytime>

1. **. Future / fase 2**

Work / Items to work with in phase 2, after specification and release of a NorDig common EPG/ Event metadata exchange format.

* 1. **Shared metadata/EPG repository**

Shared metadata repository to which everyone could send their data and from which it can be made available to third parties, only NorDig members or all globally.   
(There is an old initiative in Finland called venetsia.net)