NorDig T report to Excom

NorDig Excom meeting 8th March 2018 Stockholm, Sweden

Early/preliminary report back from NorDig Excom
Marked as "Excom" in blue text is outcome from this Excom meeting (decision, comments, tasks, feedback etc)

NorDig T (Per Tullstedt) extra report back from NorDig Excom meeting, mainly NorDig T related issues, not the official NorDig Excom report (which will come from our Excom secretary)

NorDig Excom Agenda 8th March 2018:
Place: Blu Radisson Hotel, Arlanda in Stockholm, Time: 10:00 to approx. 16:00

1. Agenda and report from previous meeting
2. Organizational matters
    2.1. Chairman for NorDig Excom
    2.2. Membership situation
    2.3. Finance matters, budget for 2018
    2.4. Organizational matters
3. Report from NorDig/T
    3.1. Next generation Audio for HEVC IRDs
        NorDig-T & Audio to present background info,
     NorDig Excom to decide for NGA
LUNCH
    Continue NGA discussion if need
    3.2. Status and report from NorDig/T general
        NorDig EPG/EIT exchange file format – ready for Excom to approval
4. Report from Industry
5. Reports from members, DVB and other organizations
6. Any other business
7. Date and place for the meetings in 2018 and 2019

NorDig 20 years

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Overview NorDig T specification work :

- Rules of Operation
  - Latest published: RoO v2.5 (published October 2016)

- Unified IRD specification
  - Latest published: IRD spec v3.0 (published November 2017)
  - Audio NGA or not - Excom to decide (separate presentation)
  - *Video HFR – future (2019) work*

- Test Plan
  - Latest: Test Plan v2.6 (published Dec 2017, now incl Test for HbbTV)

- HbbTV
  - Maintenance of NorDig's HbbTV and its test cases

- EPG/EIT exchange file format
  - Common NorDig file format, TV Anytime based
  - Final draft NorDig EPG/EIT B2B exchange file format ready for Excom to approve at this meeting

- Website and admin

Excom: noted (no comments)

Overview - informative

NorDig T – *active*

NorDig T subgroups – status

- Audio – *active* (audio related for IRD, Test Plan. Working together w Accessiblity group)

- Test – *active* (Test Plan)

- RoO – *active* (RoO spec)

- Accessibility – *active* (accessibility related for IRD, Test Plan and RoO)

- API/PVR – *active* (HbbTV testing, API+PVR related for IRD, Test Plan and RoO)

- EPG/Event exchange metadata – *active* (common NorDig format for exchange EPG metadata for broadcast and OTT)

- SSU – active (SSU Test cases)

- CA/CI+/Sec – *dormant* (CI+ v1.4/v2.x…)

- Video – *dormat* (video related for IRD, Test Plan and RoO)

Excom: noted (no comments)

Organisation and status

NorDig T – *Per Tullstedt, Teracom*

NorDig T subgroups – status

- Audio – *Johan Lindroos, SVT,*

- Test – *Pasi Toiva, Labwise,*

- RoO – *Des Mac Giolla an Chloig, RTÉNL,*

- Accessibility – *Kjell Norberg, NRK,*

- API/PVR – *Erik Vold, NRK,*

- EPG/Event metadata – *Peter Mølsted, consultant (NorDig tech secretary),*

- SSU – *Per Tullstedt, Teracom*

- CA/CI+/Sec – *dormant (CI+ v1.3, CI+ v1.4)*

- Video – *dormant (Per Tullstedt, Teracom)*

Excom: noted (no comments)

NorDig T (main group) meeting calendar 2018:

- NorDig T, Mon 29th January 2018, webinar, 10:00-15:00 CET

- NorDig T, Thu 22th February 2018, webinar, 10:00-16:00 CET

  Informative: Excom 8th March 2018 (NGA, EPG/EIT file format)

- NorDig T, Thu 5th April 2018, webinar, 10:00-15:00 CET

- NorDig T, Tue 15th May 2017, Physical TBD, 10:00-14:00 CET

- NorDig T, Tue 19th June 2018, webinar, placeholder, 10:00-12:00 CET

- NorDig T, Thu 29th August 2018, webinar, 10:00-14:00 CET

- NorDig T, Thu 20th Sep 2018, webinar, 10:00-16:00 CET.

  Informative: Excom 4th October 2018

- NorDig T, Thu 8th November 2018, webinar, 10:00-14:00 CET

- NorDig T, Tue 11th December 2018, webinar, placeholder, 10:00-12:00 CET

List of Countries using NorDig specifications (outside NorDig members), Nothing new to report, same as last meeting (same as previous report).

Several IRD manufactures and other mentions that several other territories and DVB networks refers or uses NorDig as basis for their IRD specs (especially "newer" networks). Among reasons seems open spec and content (T2, HbbTV, subtitling etc).

First list:

Country / Network	Status
Turkey DTT	Confirmed via Vestel
Several eastern Europe countries	Indications, not confirmed
Malaysia *(blue copy)*	Digita
Germany DTT (Media broadcast/TDF)	Based on/reference to NorDig IRD
Georgia DTT	Based on/reference to NorDig IRD (v2.2)

Excom: Per T reported that Italy UHD Book refers for some requirements to NorDig IRD spec + Test Plan (not all requirements).

Specification of common NorDig EPG/Event metadata exchange format (B2B)
Work done by NorDigT EPG / Event metadata subgroup.

- 22th January 2018 NorDig T approved the specification technical level**,**
- **Final draft now ready and recommend it to Excom for approval and release**, see doc:
    - *3. NorDig Metadata Exchange format specification_v1_final draft.docx*
    - *4. NorDigTVAGuidelines_20180214.zip* (package of 12 docs, ETSI only for info)

- **The NorDig common EPG/Event metadata** exchange format is meant for professional B2B use for all stakeholders in the distribution chain. The specification refers to the NorDig Unified IRD specification and NorDig Roll of Operation

- **The specification covers** EPG / Event program information both for live and On demand content, on all media platforms (broadcast TV, PC, mobile, Tablets, etc.) and various distribution networks (DTT, Sat, internet, etc.) and include rights managements

- **The NorDig EPG/Event metadata exchange format** is based on the TV-Anytime specification (hereafter TVA), latest version, which supports NorDig requirement including rights management and cross platform distribution for both Live TV and On demand

- **TV-Anytime** new version was updated with the **NorDig** requirements including program rights, ETSI had 21th. September approved the TV-Anytime update, and it is published on ETSI website.
  http://www.etsi.org/deliver/etsi_ts/102800_102899/1028220301/01.10.01_60/ts_1028220301v011001p.pdf

Excom:
- OK, specification approved.
- OK to continue work and
- OK to invite external relevant companies into this work.
- (Question from Telenor/CanalDigital if this EPG exchange file format, if this format supports "late" updates after broadcast time, to "correct" start/stop time etc, Per T will check and report back to Telenor/CD).

With the specification is released a **implementation package**, "Guidelines for implementation" including accompanying information and documents, available for download at www.nordig.org

Guidelines for implementation of NorDig TVA metadata exchange format, is a document meant for broadcasters, other content providers and distributors to facilitate planning and implementation of NorDig common EPG/Event metadata exchange format based on the TV-Anytime standard in their production chain, metadata delivering systems and distribution networks

The package contains technical guidelines for implementation of NorDig TVA EPG metadata **XML files**, including NorDig **Termslist**, NorDig **deviseType, DeviceOS and RightsType lists**, NorDig TVA **example scenarios** and NorDig TVA metadata **XML example files**.
And **"Guidelines for Last minutes update"** - document meant for help to broadcasters and other content providers to facilitate planning and implementation of "last minutes update" in their production chain and metadata delivering systems for live and "correcting" catch-up segmenting

For distribution of EPG/Event metadata is recommend to use the pull technique.
The publisher of EPG metadata should provide a public area where the latest and most updated information is available

NorDig EPG/Event metadata Group maintain the specification and will ensure future updates of the TVA specification to supports future requirements and needs in new TVA releases, and will be able to help and support with expertise and know-how to content providers and distributor

Test Plan

- Test Plan v3.0 drafting (among things incl test cases f HEVC IRDs, S2X etc):
  - Prel time plan: mid 2018
  - Work started, analysing ongoing what test cases needs to be updated
  - SSU/SW updating
    - Test cases development started for SSU Over-the-Network/Internet (new alt for NorDig IRD spec v3.0), proposal to make test cases possible as classical testing (e.g. via testlab, espec relevant for STB/vertical) but also as manufacture "self declaration" (performed by manufacture and sending test report + result to Operators, typically target iDTV/horizontal)

- *Test Plan v3.1 – future*
  - *(In case Excom decide for NGA for NorDig Unified IRD spec v3.1, then need for NGA test cases but also industry/manufactures asks for representative test streams)*

- Since Excom at this meeting decided to add one NGA and plan is now release a new NorDig IRD spec v3.1 autumn/Oct 2018, then the proposal from Test group and Per T was to skip Test Plan v3.0 (mid 2018) and head directly into a Test Plan v3.1 with goal to have new IRD spec v3.1 and Test Plan v3.1 released at same time (autum/Oct 2018). (IRD manufacture has a strong request that NorDig adds NGA test cases and also test streams).

- Excom: OK, prepare a final draft Test Plan v3.1 (incl HEVC, NGA, S2X…) to next Excom meeting Oct2018 (plan is to release IRD spec and Test Plan v3.1 at the same time)

NorDig Unified IRD spec v3.x.x – potential future version(s):

- (no drafting started)
- Bug list
  - a few number of listed typos, bug list maintained (no one pushing for new IRD release)
- Audio: NGA
  - if Excom decide for this, <u>separate discussion on this meeting</u>,
  - earlier IRD drafting for NGA exist since our v3.0 work that could shorten time for NorDig NGA drafting
- CA/CP/Security update for UHD content
  - some high level input proposal from Canal Digital, at present time no detail requirement text ready
  - CommonInterface v2 (USB), still monitoring status
- Video: HFR
  - Excom earlier decided for incl of a HFR HEVC IRD profile within 2 years after our first HEVC IRD profile Dec 2017, NorDig T has not started this work, still waiting DVB to finalise its work, earlier planned for 2019.
- HbbTV v2.0.2
  - HbbTV v2.0.2 for HEVC IRDs (not yet studied inside NorDig T/API)

- Excom:
  - v3.1 Excom has (prel) decided for NGA (one of the candidates). AP for NorDig T to prepare a new NorDig IRD spec v3.1 to next Excom meeting Oct 2018.
  - v3.1 to incl NGA, bug corrections, Security update and if –T/API group recommend also update to HbbTV v2.0.2.
  - (OK from Excom to wait with HFR, DVB has first to release spec for HFR).

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HbbTV status:

- HbbTV organization has created test cases for DRM – Dec 2017
  - asked NorDig and others for comments
- UK DTT launched HbbTV (v2.0.1/v1.4.1) - Jan 2018

New HbbTV specifications:

- HbbTV v2.0.1 (ETSI v1.4.1) – Feb 2018
  - Released a new version of v2.0.1 that includes Errata #3,
  - NorDig (API group) will now study and come with recommendation for next IRD spec
- HbbTV organization just released HbbTV v2.0.2 (ETSI v1.5.1) - Feb 2018
  - Adds HDR, HFR and NGA support that can be used for HbbTV apps/broadband for IRD supporting HDR, HFR and NGA for broadcast.
  - NorDig (API group) will now study and come with recommendation for next IRD spec, could for example be that NorDig MPEG4 IRDs HbbTV v2.0.1 functions while NorDig HEVC IRDs to support v2.0.2.

Excom: OK NorDig –T/API to investigate further and come with recommendation. If recommended by –T/API prepare updates of HbbTV requirements (e.g. v2.0.2) to coming NorDig IRD spec to next Excom meeting Oct 2018.

Next Generation Audio – NGA

Separate presentation

(see document *2. NorDig NGA - Audio Sub Group Report for ExCom_20180226v11.pptx*)

- Presentation includes background info/input from NorDig T/Audio group to help NorDig Excom decision around NGA (no/yes to NGA and which codec).
- Presentation is an updated NGA presentation from Excom meeting October 2017
  - Facts, compare AC4 vs MPEG-H, some Excom NGA decision alternatives, timeline

- NorDig Technical group still propose inclusion of NGA into NorDig IRD spec (for HEVC IRDs) but has still no preferred NGA codec of the two candidates (Dolby AC4 or MPEG-H audio)

Excom:

- Decision made by present members at Excom meeting for NGA and one NGA codec. (Chairman need to verify decision in consensus with the 2 members that couldn't participate due to illness but who had in written sent their view of NGA in advance to Excom). (NorDig T/Audio not to report which codec before Excom confirm final decision).
- After Excom confirmed NGA decision (within 2w), NorDig –T/Audio AP's:
  - Prepare/finalise NGA IRD requirements for NorDig HEVC IRDs (v3.1), to next NorDig Excom meeting (Oct 2018)
  - NGA shall be mandatory for NorDig HEVC IRDs (with grace period 2years from publication).
  - Arrange a separate meeting to open discuss Audio prio and Audio use cases (review again, inputs from CanalDigital is that as they sees it, early HEVC services likely will be "international" TV services and might be difficult to make NGA stream complete, (one mentioned case could be a HEVC service with multiple languages where not all lang in NGA and some lang only in legacy).

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END presentation
NorDig-T report

After here some detailed informative slides

ANNEX

- Annex A: NorDig T mandates 2017-2018 (March 2017)
- Annex B: old slides B2B EPG/EIT exchange file format