NorDig Technical group report to Excom

NorDig Excom meeting 9th March 2023

Agenda (draft):
Place: Stockholm + Webinar

> *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)*

1. Agenda and report, actions from previous meeting
2. Organizational matters
   2.1. Membership situation
   2.2. Finance matters, status 2022

3. **Report from NorDig/T** (Per T/NorDig T)
   3.1. Standard progress report, **proposal for mandate** 2023-2024
   3.2. Revision of NorDig specs, IRD, Test Plan and RoO (progress report)

4. (Lunch)
5. WRC23 presentation by David Hemmingway/BBC (30min)
6. Clean Audio presentation by Olof Lindman/SVT (30min)
7. Report from Industry
8. SL-HDR demo by Philips (30min)
9. Reports from members, DVB and other
10. Any other business – NorDig 25years
11. Date and place for coming meetings 2023/2024 (March physical, October online)

Green Text: text highlighted for Excom (waiting Excom decision/approval/comments)

Status lasted published specifications

- NorDig Unified IRD specification
  - Latest published: NorDig IRD spec v3.2/3.2.0 (published May 2022)
  - *Draft for next version **in progress** (not ready) v3.2.1 – minor update*
    - *9 items in bug/item list, e.g. BMP/UTF-8 for Skolt Sami for SI and TTML subtitling*

- NorDig Test Plan
  - Latest published: NorDig Test Plan v3.2/3.2.0 (published May 2022)
  - Test streams [NGA/AC-4 + old LTE interference stream] (looking into a TTML stream)
  - *Draft for next version v3.2.1 not yet started/**in progress** (not ready) - minor update*
    - *(follow IRD spec update)*

- NorDig Rules of Operation (RoO)
  - Latest published: NorDig RoO v3.2/3.2.0 (published May 2022)
  - *Draft for next version **in progress** v3.2.1 (not ready) – minor update*
    - *6 items in bug/item list, e.g. BMP/UTF-8 for Skolt Sami for SI and TTML subtitling*
    - *A number of rest items from v3.2 work, waiting for more input*

- NorDig EPG/EIT metadata exchange format
  - Latest published:
    - NorDig Metadata Exchange format specification v1.3 (Oct 2019),
    - Guidelines <u>v1.4 (June 2022)</u>
    - Genre list v1.1, List of EPG/Event metadata in NorDig TVA format v.1.1 (Sep 2020)and
    - List of EPG/Event metadata in NorDig TVA format ver. 1.1 (Oct 2020)
  - Specs is up to date

Plan is to present stable final draft to NorDig Excom to October 2023 meeting.
Originally planned final draft for NorDig Excom approval March2023

NorDig intension when updating is to publish a complete package of update all three specifications (ITD+Test+RoO) at the same time.

Excom: OK

NorDig T – mandates & items for period 2021-2022 (from March 2021)

Proposal is to renew old mandate with some minor changes ("clean" version below, markup version in Annex A)

- General:
  - Keep IRD, RoO and Test Plan in line with each other
  - Maintain and keep NorDig spec up to date (debug, reference list to international spec is up to date etc)
  - Monitor DVB, HbbTV and other relevant IRD specs changes and new technologies (e.g. DVB-I)
- NorDig Unified IRD spec
- NorDig RoO specification
    - help broadcasting avoid issues for IRD/viewers ("tips and tricks")
    - Additions to DVB Guidelines
    - minimize and shorten text that are mainly relevant for the IRD
- NorDig Test and Test plan
  - Maintain and update NorDig Test plan to match IRD spec
    - Review and where possible combine similar test cases to make it easier and faster to test
    - "minimize" redundant test cases if possible without compromising with test quality, to speed up time for verification testing.
    - Update and improve test cases
- NorDig EPG exchange file format
  - Maintain NorDig spec. of common EPG/Event exchange file format and impl. Guidelines
  - Work to promote NorDig TVA eg. via open Workshops and help impl. and use of NorDig EPG/event file format

Excom: OK

continue NorDig T mandates & items for period 2021-2022

- Video, audio, subtitling
  - monitor DVB specifications and recommendations and I/O (HDMI).
  - **NGA&TTML:** monitor NGA&TTML audio usage and experience (in order to help NorDig member using/launching NGA &/or TTML).
- HbbTV
  - NorDig HbbTV test and test cases; maintain NorDig developed test cases. Propose new test cases if needed.
  - NorDig HbbTV IRD requirements; maintain and update HbbTV requirements. Investigate, present and when confirmed by Excom draft proposal for new HbbTV requirement that are of interest for NorDig members
  - HbbTV implementation: Monitor and report HbbTV implementation in NorDig networks & IRD side, exchange experience
- Accessibility
  - Work with harmonization of broadcast and better describe current broadcast for IRD manufactures
- EPG/Event exchange file format:
  - Promote use for NorDig members for example via open workshops to support promoting and implementation of NorDig TVA format.
  - Maintain NorDig specification of common EPG/Event exchange file format and Guidelines, to be in line with TA Anytime specs

Excom: OK, accessibility is an important topic within NorDig for our Broadcast members.

- AP investigation and prepare proposal for ISO10646/BMP/"UTF-8" to support NorDig members textual language in SI/EPG data and especially for Sami language (Skolt Sami)
  - YLE and Digita has a real need for using Sami (Sami Skolt) in SI/EPG text. Need "UTF-8 BMP" to cover all letters in Skolt.
  - Current NorDig spec incl five character tables, (not yet UTF-8/ISO10646 Basic Multilingual Plane, BMP). Current five tables do not support all characters for Skolt Sami. Current NorDig spec incl one character table (ISO/IEC8859-4), that support "all" Sami languages except 10 characters for Skolt Sami.
  - "UTF-8": ISO/IEC 10646's Basic Multilingual Plane (BMP) includes 65,536 code points/characters. ISO 10646 **BMP** describe the code points/characters while **UTF-8** describe the encoding code points/character.
  - DVB TS102809 made a subset of ISO10646 BMP with approx. 365 characters addressing the Western European market, however this subset missing 10 characters for Skolt Sami. **HbbTV** default characters is based upon this subset.
  - DTG provided a liaison copy of their D-Book ISO10646 BMP character requirements (in order to minimise unnecessary differences).
  - **Excom Oct 2022 for Skolt Sami:**
    - **SI/EPG text: prepare text proposal for incl missing characters requirements,**
    - **TTML subtitling & HbbTV text: study more (legacy IRD behaviour), prepare text proposal**
    - **investigate/indication legacy IRD behaviour**

- Status March 2023 – drafting ongoing:
- NorDigT/RoO has identified all characters needed for our NorDig textual languages (English, Irish/Gaelic, Danish, Finnish, Norwegian, Swedish and now also all Nordic Sami languages -> approx. 325 characters).
- 10 characters for Skolt Sami is missing in DVB's Western European subset of ISO 10646 BMP/"UTF-8"
- Indication of legacy IRD behaviour: (Digita) preparing an MPEG test stream with Sami textual SI/EIT.

- **SI/EPG** (only characters, no font requirements): NorDigT/RoO agree inside group, IRD text proposal "ready" f adding 10 missing characters, RoO and Test Plan not ready.
    - Typical case is that few events within the broadcasted EPG (EIT) are in minority language (e.g. Sami) and then instead of having complete 7day EPG in minority language only for these minority spoken events have EPG text in this minority language still marked/signalled with main EPG languages within the network (e.g. Finnish and Swedish).
    - *info: IRD typically uses EPG/EIT languages as the IRD's setting for menu language and most legacy IRDs do support Sami for menu language/*

- **HbbTV** (default characters): NorDigT/RoO agree inside group, basic use case in HbbTV is to use downloadable fonts so no real need for adding these Sami Skolt characters, proposal is to not incl these extra characters.

- **TTML Subtitling** (characters + fonts): more complex, draft ongoing
    - TTML spec incl characters (DVB Western European "UTF-8" subset) plus
    - TTML spec incl a number of default fonts (4 font families and 7 reference fonts but spec do not excl IRD to use another font within same font family)
        - Tiresias (Tiresias family/Tiresias Screenfont) has not defined any of the 10 missing characters for Sami Skolt
        - monospaceSansSerif (monospaceSansSerif family/Letter Gothic 12 Pitch font) has not defined one of the 10 missing characters for Sami Skolt
        - proportionalSansSerif (ref.fonts: Arial, Helvetica, Liberation Sans) and monospaceSerif (ref.fonts: Courier New and Liberation Mono), support all 10 missing characters for Skolt Sami at least for the reference fonts.
    - For adding the 10 missing characters for Sami Skolt, NorDig has accept not using two of the font families (for TTML subtitling w Skolt Sami).

Excom: OK noted

- NorDig Unified IRD spec

  - Current IRD spec has as recommendation (should) text that IRDs should be energy efficient in all modes (operation, standby, updating…) and pointing to a number of European Commission (EC) regulation.

    - Text is a bit old and spring 2023 a number of EU/EC regulation related to energy efficiency comes in force/mandatory.

    - NorDig text needs to be updated and has today very little extra value.

  - Proposal is for next revision remove the whole section/text about energy efficiency.

  - Excom view?

  Excom: would prefer to keep some text around energy efficiency and EU/EC regulations. Could be written more generic, for example as "to be NorDig compliant means to follow EU regulations"

Background information (from NorDig T/Per T)

See separate input (right) from Industry and discussion at Report from Industry

- **New requirements/features:** Industry/IRD manufactures asking that BEFORE NorDig starts drafting new features and/or requirements, that NorDig have secured among NorDig Broadcast & Operator members that there is a real need and concrete plans for using these new feature/requirement (among things in order to avoid nice-to-have tools and requirements). NorDig has in past when starting with new **major** requirements/tools (like HEVC, NGA) started with first defining Commercial Requirements.

- **Grace period** (published date from which date a new coming mandatory requirement get in force). NorDig has since earlier, when introducing new stricter requirements and features/tools, included these coming requirements/changes (with a grace period) within our NorDig open published specifications, in order to give the Industry information and time to implement. These grace periods are normally checked with the Industry to get reasonable time to implement.

Excom: No decision made at this meeting.

Does not agree with Industry, NorDig has in its NorDig Charter from 2022 "Ensure that the standardization work is based on the real needs of the members and their intended use of future media services".
Grace period: maybe revisit requirements when its grace period is close to end and if need extend (similar as NorDig normally has been handling it in past).
Test streams difficult for NorDig to provide.

Industry Proposal NorDig ExCom 2023-03-09.pdf
To NorDig ExCom
2023-03-07
Industry proposal related to new IRD requirements and grace period
Adding a new requirement or feature is a major cost for the IRD manufacturers.
When these features are not going to be used by broadcasters, these unnecessary costs are ultimately at the detriment of the NorDig consumer.
Design, testing and implementation of new feature is typically long process and as a general rule any new requirement need to have two-year time to implement once the specification is fixed and the means to test it available.
Industry is therefore asking NorDig ExCom to carefully consider the process of mandating NorDig-T to develop new mandatory requirements, and to ensure this is backed by established commercial justification.
Industry proposal for ExCom minimum requirement for requesting NorDig-T to prepare any new IRD requirements
New IRD requirement shall be based on commercial justification confirmed by ExCom. ExCom shares schedule of commercial deployment of features by the broadcasters needing the new specifications (broadband is out of scope of NorDig).
NorDig/T to start work with the new requirement once the mandate with commercial justification and schedule have been provided by ExCom (and confirmed/ acknowledged by Industry?).
Industry proposal for the IRD specification section 2.5.3 Requirements that are optional for a time period (grace period)
The grace period starts from the day NorDig has provided all the tools for the manufacturers to implement the new requirements and verify compliance to them according to NorDig's intention.
The grace period start date shall be defined as the date from which all of the following criteria are satisfied:

- *the NorDig Unified Requirements are approved by ExCom and published, including the new requirements subject to a grace period, and*
- *the corresponding NorDig Test Plan approved by ExCom and published including all the testing required to verify the new requirements, and*
- *the availability to manufacturers of all the relevant test material required to verify the new requirements according to the corresponding Test Plan.*

Once the grace period start date is available, NorDig shall announce it through an update of the NorDig Unified Requirements, confirming the start date and the end date of the grace period, and/or its duration.
Best regards, ElektronikBranschens Sverige, Elektronikkbransjen Norge, Consumer Electronics Danmark, Elektroniikkan Tukkukauppiaat Ry

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New item under discussion in NorDig T group (Feb2023)

Current NorDig Rules of Operation has a sentence related to HbbTV (introduced spring 2021) and 2rn/RTÉNL now (Feb2023) reported that this is rather sensitive and controversial for them:

"NorDig Broadcasters or Operators should liaise with manufacturers before launching new HbbTV applications or before publishing significant updates to existing HbbTV applications.".

- The text was added after quite many discussions within the NorDig/T & subgroups.

- The TV manufactures/Industry has history from several occasions when Broadcasters has added an "untested" HbbTV app which misbehaved/crashed for viewers, resulting in many complains and calls to the TV manufactures.

- Broadcasters & Operators was at that time (2020/2021) reluctant but accepted it as an optional (should) requirement.

- After 2rn/RTÉNL input, the item was revisited at NorDig/T meeting Feb2023,

  - the TV manufactures still finds this text very important.

  - It was proposed to add an explanation what this liaison refers to (text still under drafting), e.g. that the TV manufactures get a chance to test the apps before real launch. Quite few active Broadcasters in NorDig HbbTV discussion

  …to be reported more on next NorDig Excom

(Excom view?)

Excom: noted, NorDig/T continue work with this and present proposal to October2023 Excom meeting.

(same as previous Excom meeting)

NorDig EPG group and Event exchange file format:

- *Keep TV Anytime spec up to date*
- *All spec are now up to date*
- *Work to promote / help impl. and use of NorDig EPG/event file format*
- *Status of implementation and use of NorDig common EPG/Event metadata exchange format, done: NRK, TV2DK, TV2NO, DR, TDC, Red Bee Media, SimpleTV, SVT, Teracom – in process: TV2DK.*

Excom: OK

NorDig Test files

- Labwise is making a NorDig adjusted version of the DVB TTML test streams, that they plans to share inside NorDig
- TV2 Norway has added TTML out of their playout and plan to provide an (updated) MPEG recording for NorDig, that could be shared inside NorDig (plan to convert/re-encode this TV2 Norway mezzanine format to consumer V/A format)
- Digita is preparing at test stream for testing Sami in SI/EIT and ISO10646 BMP/UTF-8

Excom discussion: Labwise highlighted that NorDig do not provide reference test streams for **all** our requirements (NorDig has only some very few specific cases in the past and now when the Industry asking for TTML). This is something that the testlabs or Manufactures normally create based upon NorDig IRD and TestPlan. NorDig has not the resources to create test streams, would be a huge work.

Excom: OK

- DVB video&audio codec
    - Info: V-Nova presented LC-EVC video codec at a NorDig T meeting, two layers e.g. exciting MPEG4 AVC as base layer stream and top with a LCEVC layer stream as enhancement layer.
- DVB-I
- DVB TA (Target Advertising)

Excom view?
Excom: noted, no new input/tasks/mandates for NorDig Technical group

END presentation
NorDig-T report

After here some detailed informative slides

ANNEX

– Annex A: NorDig T mandates proposal for 2023-2024 – markup version

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- NorDig Unified IRD spec
- NorDig RoO specification
    - ~~Review sections that are not fully updated,~~
        - ~~focus on~~ help~~ing~~ broadcasting avoid issues for IRD/viewers ("tips and tricks")
        - Additions to DVB Guidelines
        - minimize and shorten text that are mainly relevant for the IRD
        - ~~Investigate possibility to reference/link to NorDig members' national/operator additional RoO~~
- NorDig Test and Test plan
    - Maintain and update NorDig Test plan to match IRD spec
        - Review and where possible combine similar test cases to make it easier and faster to test
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    - Maintain NorDig spec. of common EPG/Event exchange file format and impl. Guidelines
    - ~~Keep TV Anytime spec. up to date~~
    - Work to promote NorDig TVA eg. via open Workshops and help impl. and use of NorDig EPG/event file format

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Informationsklass: ÖPPEN

continue NorDig T mandates & items for period 2021-2022

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- HbbTV
  - NorDig HbbTV test and test cases; maintain NorDig developed test cases. Propose new test cases if needed.
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  - HbbTV implementation: Monitor and report HbbTV implementation in NorDig networks & IRD side, exchange experience

- Accessibility
  - Work with harmonization of broadcast and better describe current broadcast for IRD manufactures
  - ~~HbbTV for Accessibility services – investigate how HbbTV can be used for Accessibility and if needed propose changes to IRD and RoO requirements~~
  - ~~Investigate benefits with NGA for accessibility~~

- ~~CA and CI~~

- ~~DVB-I – wait for Excom (note: Excom plan for next Excom meeting to have a presentation of DVB-I hopefully from DVB or some other external expert of DVB-I)~~

- EPG/Event exchange file format:
  - Promote use for NorDig members for example via open workshops to support promoting and implementation of NorDig TVA format.
  - Maintain NorDig specification of common EPG/Event exchange file format and Guidelines, to be in line with TA Anytime specs