



# NorDig T report to Excom

NorDig Excom meeting 14<sup>th</sup> October 2021 (webinar/Teams)



## Agenda:

**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 from previous meeting
2. Organizational matters
  - 2.1. Membership situation
  - 2.2. Finance matters, budget
  - 2.3. Organizational matters
- 3. Report from NorDig/T** (Per T/NorDig T)
  - 3.1 Progress report
  - 3.2 NorDig technical specifications,
    - NorDig Unified IRD specification (IRD) – draft for v3.1.3 not ready, *see slide 3*
    - NorDig Rules of Operation (RoO) - v3.1.3draft001 but recommend wait for IRD+TestPlan, *see slide 3*
    - NorDig Test Plan – draft for v3.1.3 not ready, *see slide 3*
  - 3.3 TTML questionnaire - *see slide 5-6*
4. Report from Industry
5. Reports from members, DVB and other
  - 5.1. DVB-I presentation by Peter MacAvock and Emily Dubs/DVB (13-14CET)
6. Any other business
7. Date and place for the meetings in 2022

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

## Status lasted published specifications

- NorDig Unified IRD specification
  - Latest published: NorDig IRD spec v3.1.2 (published April 2021)
- NorDig Test Plan
  - Latest published: NorDig Test Plan v3.1.2 (published April 2021) + Test streams [NGA/AC-4 + old LTE interference stream]
- NorDig Rules of Operation
  - Latest published: NorDig RoO v3.1.2 (published April 2021)
- NorDig EPG/EIT metadata exchange format
  - Latest published:
    - NorDig Metadata Exchange format specification v1.3,
    - Guidelines v1.3.1 and
    - Genre list v1.1, List of EPG/Event metadata in NorDig TVA format v.1.1

- NorDig Unified IRD specification
  - Latest published: NorDig IRD spec v3.1.2 (published April 2021)
  - Draft proposal for NorDig IRD spec v3.1.3 not ready, listed/proposed items NorDig IRD v3.1.3 within NorDig T group:
    - No major/urgent items
    - Update reference list (some ref are very old versions of DVB spec) and typo corrections
    - Audio AC4 - some clarification around signalling (questions from Industry)
- NorDig Test Plan
  - Latest published: NorDig Test Plan v3.1.2 (published April 2021) + Test streams [NGA/AC-4 + old LTE interference stream]
    - Labwise has now reviewed testing to new TestPlan v3.1.2 and tested NorDig test cases – OK
    - TTML – Labwise made a NorDig version with NorDig signalling of DVB available TTML test streams – waiting Industry feedback.
  - Draft proposal for NorDig IRD spec v3.1.3 not ready, listed/proposed items NorDig IRD v3.1.3 within NorDig T/Test group;
    - No major/urgent items, update reference list and typo corrections
- NorDig Rules of Operation
  - Latest published: NorDig RoO v3.1.2 (published April 2021)
  - New draft proposal RoO v3.1.3 d001,
    - RoO v3.1.3 draft001 ready but propose to wait until IRD+TestPlan is also ready, target March2022 - **Excom?**
    - main proposed changes so far: part of SI, General/intro and Annex D (old Annex D: some moved into SI & remaining Annex D)
    - If wait v3.1.3 to March2022, then proposed to continue with some remaining part like Transmission/modulation.
- **Excom: OK wait w RoO v3.1.3, target instead March2022 and then complete package IRD+TestPlan+RoO v3.1.3, no new content than above.**
- **Excom: AP for NorDigT/RoO (question from YLE&Digita) review/improve RoO text around which character set to be used for 'Sami' (invite/incl YLE/Digita to this work, Risto/YLE will come back with contact person)**
- NorDig EPG/EIT metadata exchange format
  - Latest published:
    - NorDig Metadata Exchange format specification v1.3,
    - Guidelines v1.3.1 and Genre list v1.1,
    - List of EPG/Event metadata in NorDig TVA format v.1.1
  - no changes last period.
- **Excom: noted**

- NorDig Website and admin

- e-mail reflector: NorDig subgroup RoO started testing with e-mail reflector (from UK based Gaggle, which is a separate tool compared to NorDig website that uses WordPress) and seems to work for everyone. Some but low cost (3USD/y & person on list -> 300USD/y for 100 persons) for using this Gaggle e-mail reflector . Plan is to extend using this e-mail reflector in all NorDig T groups – **Excom view?**
- **NorDig Excom group, should we also have e-mail reflector for this group?**
- **Excom: OK for NorDig T to use mail reflector. Excom no need today, waiting w reflector at this time, continue w classical e-mail lists**
- History page with old versions of our specifications
  - Currently latest version + one previous version + delta (*for example, today v3.1.2<sub>y2021</sub> + v3.1.1<sub>y2019</sub> + delta3.1.2vs3.1.1*)
  - Industry asks/propose NorDig to make a 'history' page with all version from e.g. 2012 or 2014 and forward (no need to go back to 1997). Some networks/Countries (non-NorDig-members) is referring to a specific version, which after some years is removed from NorDig website. – **Excom view?**
- **Should we establish and publish a 'history page' with old versions of our specifications? If so starting from when (e.g. 2012, 2014, 2006)?**
- **Excom: yes, OK to establish a separate history page (but only with open published version, no drafts and NorDig T to decide from when to start but typically fr y2012)**

## NorDig EPG group and Event exchange file format:

- *Keep TV Anytime spec up to date*
- *Updated of guidelines*
- *Work to promote / help impl and use of NorDig EPG/event file format*
- **Open workshop 8 April 2021 (webinar)**
  - On demand and TVA – how to promote OD content
  - How to use Google TV, EIDR and other with TVA
  - Images for EPG data
  - Plan next open workshop in Nov/Dec 2021
- **Last period,**
  - OnDemand content via using TV Anytime
  - more/better related images for content/events with a number of use cases
- *Status of implementation and use of NorDig common EPG/Event metadata exchange format, done or in process: NRK, TV2DK, TV2NO, DR, TDC, Red Bee Media, SimpleTV, SVT and Teracom – no reported changes last period.*

Last NorDig Excom March2021 AP for NorDig T to investigate current and future plans for DVB TTML (question from industry)

### Result from NorDig/T/RoO TTML investigation and questionnaire (1 of 2):

	NRK	SVT	Discovery	TV2 Norge	DR	TV2 Danmark	RTÉ Transmission Network - Éire
<b>Broadcast services:</b> Are you using TTML subtitling (non-burn-in subtitling) in your broadcast services today?	no	no	no	yes	no	no	no
<b>Broadcast services:</b> If yes, are you using TTML subtitling for HoH?	<b>TV2 Norge:</b> We have recently switched over to a new distribution platform where we are offering our HoH subtitles as DVB (bitmaps), DVB TTML and OP47 teletext to our distribution partners. It is currently up to them which one they are using. The last feedback I had from the distributors is that some of them are testing the TTML feeds now.						
<b>Broadcast services:</b> Are you planning to use TTML subtitling (non-burn-in subtitling) in your broadcast services?	yes	no	no	yes	no	no	no
Comments	<b>NRK:</b> NRK is planning to use DVB-TTML for the linear broadcast services from approx. 2023. This will be along with DVB Subtitling which is used today. <b>TV2 Danmark:</b> No actual plans, but we expect to use TTML if or when we are offering UHD						
<b>Broadcast services:</b> What TTML services due you have planned for your broadcast services and when will they be implemented?	<b>TV2 Norge:</b> We are looking into this, but we might have to offer bitmaps as well as TTML to our distribution partners for phase 1, as TTML is new both to us and to the distributors. We will start off with HoH subs before we possibly will move all subtitling over to these two formats. <b>TV2 Danmark:</b> We expect to stop burned in subtitles in a UHD channel and offer translation, hard of hearing and descriptive subtitles						
<b>Online services:</b> Are you using TTML subtitling (non-burn-in subtitling) in your Online services today?	no	no	no	yes	no	-	no
comments	<b>NRK:</b> NRK use WebVTT for subtitling on NRK.TV (NRK's net player). This is under the W3C umbrella of web standards and well supported by user devices. <b>SVT:</b> HoH services: User activated function in app/web page for all Swedish speaking programs. <b>TV2 Norge:</b> Currently in use for VOD content only on certain stream formats (other formats are using WebVTT subs). <b>DR:</b> For VOD we use overlay with WebVTT. For simulcast/live we use burn-in.						

Last NorDig Excom March2021 AP for NorDig T to investigate current and future plans for DVB TTML (question from industry)

Result from NorDig/T/RoO TTML investigation and questionnaire (2 of 2):

	NRK	SVT	Discovery	TV2 Norge	DR	TV2 Danmark	RTÉ Transmission Network - Éire
<b>Online services:</b> If yes, are you using TTML subtitling for translation/normal subtitling?	<b>TV2 Norge:</b> Currently in use for VOD content only. <b>DR:</b> For subtitles translation we use overlay, but fix so user can toggle/remove its always on.						
<b>Online services:</b> If yes, are you using TTML subtitling for HoH?	<b>TV2 Norge:</b> Currently in use for VOD content only. The viewer can select foreign language subtitling or HoH in the player. <b>DR:</b> Currently in use for VOD content as WebVTT. For live we use burn-in.						
<b>Online services:</b> Are you planning to use TTML subtitling (non-burn-in subtitling) in your online services?	no	no	no	yes	yes	-	no
comments	<b>TV2 Norge:</b> We plan to implement TTML subtitling on the simulcast feeds coming from our linear broadcast platform. The OTT platform will receive these subs in the same way as the broadcast distributors. It requires development on our OTT player to be able support TTML insertion on the simulcast channels. <b>DR:</b> We plan to use TTML for dash HbbTV, to be investigated in Q2-22						
<b>Online services:</b> What TTML services due you have planned for your online services and when will they be implemented?	<b>TV2 Norge:</b> The plan is to start off with HoH on the simulcast channels, then possibly move all subtitling over to TTML if we turn off burnt-in subtitling on the linear broadcast platform. <b>DR:</b> We plan to use TTML for dash, HbbTV to be investigated in Q2-22						

### Excom meeting:

- TV2 Norge present TTML broadcast is assumed to refer to Broadcaster's delivery signals out from its playout and input to the different distribution platforms and then up to network operator choose to fwd TTML or not, which reports today indicates that network operator do not fwd the TTML signal into satellite, cable or DTT networks.
- YLE missed to reply upon this, Risto/YLE will deliver YLE's reply upon this questionnaire

Results from questionnaire also available as separate word document with some more details in comments

*Question from Industry*

Could NorDig provide Broadcasters' intention for:

- using of Dolby AC4?
  - If so broadcast and/or broadband/online?
  - If so which of the features of Dolby AC4 do they intend to use then?
- 4k/UHD or FullHD/1080p format?
  - If so broadcast and/or broadband/online?

Maybe a similar questionnaire?

Excom: OK good idea, AP for NorDig T. However make more generic (e.g. NGA), incl other features like dHDR/HDR/SDR, diff plans broadcast vs online/broadband (e.g. where broadcast maybe continue as is while new formats is introduced on Ondemand/Broadband) . Report back next Excom meeting.

Note: 'Branchkansliet' (Nordic trading organization) reports that IRD Industry wishes more clear information from Broadcasters about their plans of launching/impl new features & formats.



- DVB video&audio codec
- DVB-I
  - Excom meeting: there is an interest among NorDig Broadcasters for DVB-I (potentially for replacing current classical DVB broadcasting in the long term), but still too early for NorDig to start any activity upon this. Excom will continue discussing this more next meeting March 2022.
- DVB TA (Target Advertising)

Excom view?

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).*

Country / Network	Status
Turkey DTT	Confirmed via Vestel
Several eastern Europe countries	Indications, not confirmed
Malaysia ( <i>blue copy</i> )	Digita
German DTT (Media broadcast/TDF)	Based on/reference to NorDig IRD
Georgia DTT	Based on/reference to NorDig IRD (v2.2)
French DTT/FAVN ??	Based on/reference to NorDig IRD v??
Italien DTT + Satellite	Partly based on/reference to NorDig IRD (v2.5, RF), partly own requirements (e.g. SI)
Poland DTT	Refers to part of NorDig IRD (FE, audio parts)

## END presentation NorDig-T report

After here some detailed informative slides

### **ANNEX**

- Annex A: NorDig T mandates 2021-2022 - informative
- Annex B: NorDig T meeting calendar 2021 - informative
- Annex C: NorDig T subgroups – informative

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

- 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
  - Review sections that are not fully updated,
    - focus on helping broadcasting avoid issues for IRD/viewers (“tips and tricks”)
    - Additions to DVB
    - 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
    - “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
  - 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

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
  - 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

### NorDig T (main group) meeting calendar 2021:

- NorDig T, #1, 13th January 2021, webinar, 10:00-12:00 CET
- NorDig T, #2, 3rd February 2021, webinar, 10:00-12:00 CET
- NorDig T, #3, 3rd March 2021, webinar, 10:00-13:00 CET  
*Informative Excom 11th March 2021*
- NorDig T, #4, 31th March 2021, webinar, 10:00-12:00 CET
- NorDig T, #5, 26th May 2021, webinar, 10:00-12:00 CET,
- NorDig T, #6, 1st September 2021, webinar, 10:00-12:00 CET
- NorDig T, #7, 29th September 2021, webinar, 10:00-12:00 CET  
*Informative Excom 14th October 2021*
- NorDig T, #8, 3rd November 2021, webinar, 10:00-12:00 CET
- NorDig T, #9, 8th December 2021, webinar, 10:00-12:00 CET.



## Overview - informative

*group – status - chairman*

NorDig T – *active* – *Per Tullstedt, Teracom*

## NorDig T subgroups – status

- Audio – *active* – *Johan Lindroos, SVT*
- Test – *active* – *Pasi Toiva, Labwise*
- RoO – *Des Mac Giolla an Chloig, RTÉNL and Peter Mølsted consultant (NorDig tech secretary)*
- HbbTV/API/PVR – *active* – *Erik Vold, NRK*
- EPG/Event exchange metadata – *active* - *Peter Mølsted, consultant (NorDig tech secretary)*
- *Accessibility – dormant – Kjell Norberg, NRK*
- *SSU – within NorDig T*
- *CA/CI+/Sec – within NorDig T*
- *Video – within NorDig T (been active for v3.1.1 now dormant)*