

NorDig T report to Excom

NorDig Excom meeting 5th March 2020 Stockholm, Sweden

NorDig ExCom agenda 5th March 2020:

Place: Clarion hotel, Arlanda in Stockholm



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

For y2020: new Excom chair Jesper Ringgaard Kjeldsen DR, Secretary Kari Eriksson Sony, NorDig T chair Per Tullstedt Teracom

3. Report from NorDig/T (Per T/NorDig T)

- Status and Planning - standard report
- New version of Rules of Operation (v3.1.0), slide 3 and DRAFT proposal
- Text proposal for dHDR, slide 4 and AnnexE
- Updates of TV Anytime, slide 5 informative

4. Report from Industry

5. Reports from members, DVB and other

- Updates of 5G (NRK LTE test, 5G MAG, 5G Media Group)

6. Any other business

7. Date and place for the meetings in 2020/21

- Rules of Operation
 - Latest published: RoO v2.5 (published October 2016)
 - Update of RoO to v3.1.1, target Oct 2020
 - Excom: change layout to same as IRD spec, most important content for RoO shall be items necessary to avoid misbehavior in IRDs.
 - Status March 2020 - drafting ongoing, some parts/sections ready today, other parts just started/not ready
 - Proposal – two alternatives, **Excom to decide** (see next slide)
 - Alt1 – publish update in two steps, March2020 + Oct2020.
 - Alt2 – one step, wait until all parts are ready, Oct2020.
- Unified IRD specification – *up to date*
 - Latest published: IRD spec v3.1.1 (published September 2019)
 - Next version – not yet started (no/too few new items),
 - Maintenance – buglist
 - dHDR (dynamic metadata HDR) – drafting text proposal, prepared for whenever next IRD spec version is issued (Excom decided Oct2029 to not mandate dHDR, instead just add IRD not to be disturbed and if used then as DVB)
- Test Plan – *up to date*
 - Latest: Test Plan v3.1.1 (published September 2019)
 - NorDig Test streams, 12 streams for testing NGA/AC-4 + old LTE interference stream
 - Next version – not yet started (no items)
 - Industry kindly asks for TTML reference test streams
- EPG/EIT exchange file format - *no new documents/specifications (minor updates has done last period to documents)*
- Website and admin - *no changes*

Members of RoO Group: Nicholas Frame TP Vision, Kari Eriksson Sony, Richard Moreton Samsung, Richard Moreton Samsung, Andrex Lipscombe Samsung, Johan Lindroos SVT, Jonas Rödén Dolby, Schreiner, Stephan Dolby, Per Tullstedt Teracom, Kjell Norberg NRK, Juha Joki SofiaDigital and Peter Mølsted Chairman (deputy for Des Mac Giolla an Chloig). *(Des Mac Giolla an Chloig, chair, fully occupied with regular work 2019, update of DTT during clearance 700MHz band)*

NorDig RoO spec update to v3.1.1 (to same version as IRD and Test Plan)


The new RoO specification from ver. 2.5 to ver. 3.1.1 will be a **major** update to be in line with IRD spec. v. 3.1.1. (4x IRD spec. versions)

- Work on simplify the specification format and make it more in line with the IRD spec. design
- Status now March 2020
 - some parts/sections ready today (audio, txt, subtitling)
 - other parts just started/not ready (video, SI, CA, “transmission”/FE)
 - Some parts proposed to be omitted/moved to Annex (PVR)
- NorDig RoO spec v3.1.0 DRAFT005 now ready to with the mature parts

Question to Excom, how to publish RoO, two alternatives, Excom to decide

- Alt1 – publish update in two steps, March2020 + Oct2020. Now by March2020 publish a first v3.1.0 with parts are now ready and by Oct2020 publish a complete update to final v3.1.1 with all remaining parts (recommended by NorDig T and RoO subgroup), **this require Excom to approve v3.1.0 (DRAFT005) now (via typically 2weeks silent approval procedure)**
- Alt2 – wait to Oct2020, publish update in one step, then todays presented draft proposal v3.1.0 is just informative, **Excom wait with approving until Oct2020.**

Excom March 2020: decided for Alt2 (wait w publish until a complete/more complete update is ready, one step update). A two-step update of RoO could lead to that some readers of first update version believe that all sections is updated. However a news to be published a NorDig website that update work is ongoing and interested (members and invited) are welcome to participate and get access to draft version.



NorDig Rules of Operation
Version 2.5
for
NorDig Unified Receiver Networks

Page 1 of 77




Table of contents

| | | |
|-------|--|----|
| 1 | GENERAL | 4 |
| 1.1 | Scope | 4 |
| 1.2 | Document History | 4 |
| 1.3 | Abbreviations | 5 |
| 2 | PROGRAMME SPECIFIC INFORMATION AND SERVICE INFORMATION (PSI) | 7 |
| 2.1 | General | 7 |
| 2.2 | PSI - Programme Association Table | 8 |
| 2.3 | CAT - Conditional Access Table | 8 |
| 2.4 | PMET - Programme Map Table | 8 |
| 2.5 | Network Information Table (NIT) | 11 |
| 2.5.1 | Service Information | 11 |
| 2.5.2 | Logical Channel Description | 11 |
| 2.5.3 | Frequency List Description | 11 |
| 2.6 | Service Description Table (SDT) | 19 |
| 2.6.1 | Service Description Table (SDT) Actual DTT Other | 19 |
| 2.6.2 | Service Description Table (SDT) Actual DTT Other | 19 |
| 2.7 | Event Information Table (EIT) Actual | 21 |
| 2.7.1 | Service Information | 21 |
| 2.8 | Event Information Table (EIT) Other | 24 |
| 2.8.1 | Service Information | 24 |
| 2.9 | Time Table (TT) | 26 |
| 2.10 | Time Table (TT) Other | 26 |
| 3 | TUNING AND NAVIGATION | 27 |
| 3.1 | One-Step Tuning | 27 |
| 3.1.1 | Original Network ID | 27 |
| 3.1.2 | Network ID | 27 |
| 3.1.3 | Transport Stream ID | 27 |
| 3.1.4 | Service ID | 27 |
| 3.1.5 | Private Data Descriptor | 28 |
| 3.1.6 | Source ID | 28 |
| 3.1.7 | Event ID | 28 |
| 3.1.8 | Link to EIT Schedule | 29 |
| 3.2 | Service Tuning for Satellite Networks | 30 |
| 3.2.1 | Service Tuning for Satellite Networks | 30 |
| 3.2.2 | Service Tuning for Satellite Networks | 30 |
| 3.3 | Service Tuning for Cable Networks | 34 |
| 3.3.1 | Service Tuning for Cable Networks | 34 |
| 3.3.2 | Service Tuning for Cable Networks | 34 |
| 3.4 | Service Tuning for Terrestrial Networks | 37 |
| 3.4.1 | Service Tuning for Terrestrial Networks | 37 |
| 3.4.2 | Service Tuning for Terrestrial Networks | 37 |
| 4 | VIDEO TRANSMISSION | 41 |
| 4.1 | MPEG-2 | 41 |
| 4.2 | MPEG-4 | 41 |
| 4.3 | Small Picture - MPEG-4 AVC | 48 |
| 5 | AUDIO TRANSMISSION | 49 |

Page 2 of 77

Dynamic metadata HighDynamicRange (dHDR) – status report

- *NorDig Excom decided Oct 2019*
 - *at present time Public Service Broadcasters has no concrete plans and low interest for dHDR*
 - *decision to not mandate dHDR (and then no need to make a selection of one of the 3 DVB's dHDR technologies)*
 - *decide to add into next NorDig IRD spec if dHDR is used then signaling shall be as DVB specified and IRDs shall not be disturbed by formats not supported. AP for NorDig T to prepare proposal,*
 - *however this item is not seen as important to trigger any immediate release of new spec, instead item to be incl whenever next release is released*
- NorDig T/video – status dHDR
 - Drafting ~~almost ready with stable of~~ text proposal ongoing for NorDig IRD spec and for NorDig RoO
 - NorDig T/API plans to send Liaison letter HbbTV asking guidelines if and when DVB's dHDR supported
 - If a NorDig platform would use dHDR for some broadcasted services (e.g. some premium service), then dHDR might also be used for that service(s) in the platform's/broadcaster' broadband HbbTV Play services (e.g. catch-up/play services). HbbTV not yet dHDR in their spec.
 - Industry/TV set manufactures has commented to earlier drafting not in line with Excom decision and that drafts implies too much, draft has after this been changed and so far no comments to latest draft.
 - LG and Sony has sent comments 3rd March, they prefer that dHDR should not be mentioned at all
 - See Annex E for details of latest draft proposal for dHDR into NorDig IRD + RoO specs (or download complete draft proposal NorDig website, member section, NorDig T group)

Excom March 2020: Noted, continue drafting.

(Sony presented an alternative very short text proposal similar to French DTT spec, but was too un-precise)



SDR



Static HDR



Dynamic HDR

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 Dec 2019 at TDC Denmark
- Next open workshop May 2019 at SVT Stockholm
- Last period, working on Genre list, some discussion of using EPG data to help with audience measurement and how to generate ids.
- 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.

Informative

- NorDig EPG exchange file is based upon international standard TV Anytime and NorDig relies upon that TV Anytime specs is maintained.
- TV Anytime chairman Jean-Pierre Evain will retire summer 2020, it has been a challenge to find somebody that replace Jean-Pierre (EBU struggling w founding). Preferred for NorDig would be if someone from EBU or DVB (office) could replace him.
- No good scenario for NorDig would be if this TV Anytime group get no new chairman, then all updates (even small) would have to be take directly up ETSI in a quite complex procedure.
- We have now received information that discussions is ongoing right now and hopefully DVB will continue chairing TV Anytime.

Excom March 2020: NorDig should prepare an input to DVB (to coming DVB steering board meeting July 2020) that asks/pushes DVB to take care of TV Anytime specifications.

Excom March 2020: big thanks to NorDig EPG group for all their work so far!!

NorDig Unified IRD spec future – “v3.2” proposals:

- General
 - Bug list - a few number of listed items,
- Video:
 - Dynamic HDR, text draft (optional, IRD shall not be disturbed, if used then according w DVB)
- CA/CP/Security
 - CommonInterface v2 (USB), still monitoring status, **members interest?**
- Audio – none
- Subtitling – none
- HbbTV - none
- FrontEnd – none
- SSU - none
- PSI/SI, menus etc...
- Others?

Excom March 2020: no further inputs/items to NorDig T

- DVB CI v2 (USB)
- DVB-I
- DVB TA (Target Advertising) – *see also attachment HbbTV Liaison letter*
 - NorDig T has received a Liaison letter 19th Feb 2020 from HbbTV informing NorDig about the completion of HbbTV specification for targeted advertising (TA), in co-operation with DVB (HbbTV defines API in IRD, DVB defines broadcast signalling and returning advert from broadband (Ads) server).
 - TA an optional extension to HbbTV that enables replacing of broadcast content (e.g. adverts) with broadband-delivered content (e.g. ads that are targeted to a particular consumer or group of consumers).
 - BUT this DVB+HbbTV TA tool could also be used for a more non-commercial uses such as switching from national to regional/local content and back again.
 - Some IRD/TV manufacturers **says they require** (commercial) agreement between a broadcaster and a manufacturer when used for commercial purposes (i.e. TA for commercial TV services).
 - IRD/TV Manufactures reports that it is another thing for non-commercial purposes like public service using this for regional/local insertion.
 - **However DVB+HbbTV TA technology has implementation cost for IRD**
 - Together with HbbTV watermark could potentially make it work also for STB solution (i.e. for cases w non-HbbTV STBs connected via HDMI to a HbbTV TV set)
 - **Excom March 2020: Among broadcasters right now low interest (YLE interested to get more info)-> NorDig T monitor status on TA.**

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 | Might be based on/reference to NorDig IRD |