



# NorDig T report to Excom

NorDig Excom meeting 29<sup>th</sup> September 2015 Stockholm, Sweden

## Report from NorDig T to Excom

### **NorDig Excom Agenda 29<sup>th</sup> September 2015:**

*Place: Arlanda Hotel, Arlanda in Stockholm, Time: 10:00 to approx. 16:00*

#### 1. Agenda and report from previous meeting

#### 2. Organizational matters

Membership situation

Finance matters

#### 3. Report from NorDig/T

Specification and work status

Presentation and approval of Test Plan

Special issues

#### 4. Report from Industry

Report from Nordic Product Manager meeting

Report from industry members

#### 5. Invited presentation: Accessibility services, Kjell Norberg NRK

#### 6. Reports from members, DVB and other organizations

#### 8. Frequency issues (related to 700 and 800MHz freq band)

#### 9. Any other business

Excom date and place for the meetings in 2016: February 18<sup>th</sup> 2016 and September 29<sup>th</sup> 2016



# NorDig T report - Overview specification work

NorDig Excom meeting 29<sup>th</sup> September 2015

## Overview NorDig T specification work :

- Rules of Operation
  - v2.0 target: Q4 2015
- Unified IRD specification
  - *v2.5.1 has been published July/Aug 2014 (v2.5 and then correction to v2.5.1)*
  - New version target “v2.6” mid 2016 (corrections/debugging and some new)
- Test Plan
  - *v2.4 has been published Feb 2014*
  - **v2.5 stable draft now ready (originally planned Q2 2015, incl test for PVR crids, HbbTV etc )**
- HbbTV
  - Test cases (both NorDig and HbbTV test specs), test cases now delivered to HbbTV, (Sofia Digital consulting for creating and maintain our NorDig HbbTV test cases).
- **Website**
  - **Proposal for new structure**



# NorDig T report - Work and subgroups

NorDig Excom meeting 29<sup>th</sup> September 2015

## Overview

NorDig T – *active*

NorDig T subgroups – status

- Video – *dormant*
- Audio – *active* (audio related for IRD, Test Plan and RoO. Working together w Accessibility group)
- Test – *active* (Test Plan)
- RoO – *active* (RoO spec)
- Accessibility – *active* (accessibility related for IRD, Test Plan and RoO)
- PVR/API – *active* (HbbTV testing (cases+setup), API+PVR related for IRD, Test Plan and RoO)
- CA/CI+/Sec – *dormant* (CI+ v1.4)
- (SSU – *closed* after IRD v2.5 work)



# NorDig T report - Work and subgroups

NorDig Excom meeting 29<sup>th</sup> September 2015

## Organisation and status

NorDig T – *Per Tullstedt, Teracom*

## NorDig T subgroups – status

- **Video** – *dormant (future maybe HEVC, UHDTV, HDMI 2.x etc)*
- **Audio** – *Johan Lindroos, SVT, preparing proposals related to audio for IRD, RoO and Test specs*
- **Test** – *Pasi Toiva, Labwise, drafting NorDig Test Plan*
- **RoO** – *Des Mac Giolla an Chloig, RTÉNL, drafting RoO spec*
- **Accessibility** – *Kjell Norberg, NRK, preparing proposals related to accessibility (audio, video, subtitling, menus...) for IRD, RoO and Test specs*
- **PVR/API** – *Erik Vold, NRK, preparing proposals related to PVR and API (HbbTV) for IRD, RoO and Test specs. Investigations DRM alt, test model/process. Creating complementing HbbTV Test streams*
- **CA/CI+/Sec** – *dormant (CI+ v1.3, CI+ v1.4)*
- **SSU** – *dormant*



# NorDig T report - Meeting calendar 2014

NorDig Excom meeting 29<sup>th</sup> September 2015

## NorDig T meeting calendar 2015:

- 13th Jan 2015, telco/webinar  
*Informative: NorDig Excom 27 Jan*
- 10th March 2015, telco/webinar
- 13th May 2015, physical (Stockholm, Sweden)  
*Informative: NorDig Excom 26 May*
- 16th June 2015, shorter webinar before summer break  
  
*Informative: IBC 10-15 Sept*
- 22th Sep 2015, physical (London, UK)  
*Informative: NorDig Excom 29 Sep*
- 27th Oct 2015, telco/webinar
- 8th Dec 2015, shorter webinar before X-mas



# NorDig T report - RoO

NorDig Excom meeting 29<sup>th</sup> September 2015

## Rules of Operation – status report

- v2.x target: Q4 2015 – on schedule
- Progress report from Des:
  - Audio section, third draft in preparation (Peter, Johann and Des) codec, signalling, bitrates, quality etc very happy with progress.
  - PVR signaling section added to RoO first draft completed (Peter & Des).
  - API – HbbTV (Peter, Erik, Juha & Des) started work on 1st Draft.
  - The cooperation is working well with e.g. draft by Peter, edit by Des, additional by Johann, subsequent edit by Des etc
- RoO document structure. Not easy to have same structure as IRD spec. During drafting current draft structure will be used (more suitable for RoO readers, but different from IRD spec) and when text is more mature then RoO structure could if needed it could changed to similar as IRD spec or keep current drafted structure.



# NorDig T report - Test plan

NorDig Excom meeting 29<sup>th</sup> September 2015

## Test Plan

- Test Plan v2.5.0 (matching IRD spec v2.5.1) stable draft 0.21, *original time plan Q1.2015*:
  - Main changes in this release are:
    - Test case and chapter numbering changed, test cases updated: DVB-T/T2 SSI, DVB-C, PVR, Audio and Video
    - This v2.5.0 draft0.21 is now “complete”, i.e. has finally test cases for “all” IRD requirement except HbbTV
  - Test Plan v2.5.0 draft 0.21 sent inside NorDig T 21 Sept 2015 and Excom 28 Sept 2015, so far some comments from Sony and other (minor and typos)
  - **Proposal: Excom to approve (1-2w to comment), OK to correct minor/typos?**
  - NorDig HbbTV test requirement is proposed to initially come as a Amendment to Test Plan v2.5.0, needs approx. 2 month (Nov 2015) to draft and as an amendment more easy to update. If possible **approve by Excom via e-mail (Nov/Dec), otherwise next Excom** (Feb 2016)
  - *NorDig HbbTV test requirements intended to describe that HbbTV testing based on HbbTV organisation test suits, describe which tests are mandatory, describe NorDig specific test cases are mandatory and maybe incl 1-2 NorDig classical test cases. Similar as already described in IRD spec but more detailed.*
- After Test Plan v2.5.0 - debugging/corrections, make tests more efficient to test etc, review audio test cases (“no” new missing test cases planned for IRD spec v2.5.1).



# NorDig T report - Accessibility

NorDig Excom meeting 29<sup>th</sup> September 2015

## Accessibility status report

- Remote control
  - Review/update old text (see separate slide)
  - RC for accessibility settings (if possible collect all accessibility settings: HoH subtitling, AD audio etc)





## HbbTV and PVR - status report

- Many activities related to HbbTV
- HbbTV test cases
  - Contributed our NorDig HbbTV specific test cases to HbbTV organization
  - Maintenance now ongoing
- RoO input related to HbbTV made
- Test Plan related to HbbTV testing
  - Prepare text (addendum) to Test Plan, autumn 2015
- PVR Lite / TV Recorder – still waiting input proposal from TV industry
- *Helping accessibility group with Remote Control (related to HbbTV and PVR)*



# NorDig T report - IRD

NorDig Excom meeting 29<sup>th</sup> September 2015

## NorDig Unified IRD spec

- No major updates or new requirement foreseen, **proposal v2.6 mid 2016**
- Maintain and update current requirements for NorDig (22 items on bugzilla list).
- *Codecs (separate issue: MPEG-H HEVC video, MPEG-H audio, Dolby AC4 etc)*
- Update guidelines wordings in GUI and translations (mainly related Accessibility and Audio)
- Review and improve IRD's auto update for network changes
- FE (DVB-T/-T2) review if 800MHz scanning can be removed (NRK) and add optional requirements for 700MHz LTE immunity (hopefully via reference to ITU/ETSI) - **started**
- IPTV – ComHem launching IPTV and has some interest to updated current IPTV IRD requirement.
- IRD surveillance (like using TR069), some interest to investigate this more.
- SSU, add alternative for broadcasting SSU notification in accordance with new DVB SSU spec 2015 for IRDs with very large file size – **(DTG D-book v8 has incl this)**
- Recommendation Remote Control related to accessibility settings, check if possible to get a RC key for changing Accessibility setting or modify current requirements and recommendations. (Ensure RC can be via Smartphones etc) - **started**
- HbbTV – investigate and prepare update IRD spec for latest HbbTV v1.5 (i.e. latest errata) - **started**
- TV recorder – closed. No need to define TV Recorder (PVR lite) unless someone volunteer to come with a more concrete text proposal – **(Vestel and Samsung interested) waiting**
- Mix of broadcast and OTT (ideal/intension one common channel list of broadcast and broadband/OTT services for hybrid receivers, viewers should ideal not notice zapping diff between zapping among broadcast or OTT services)



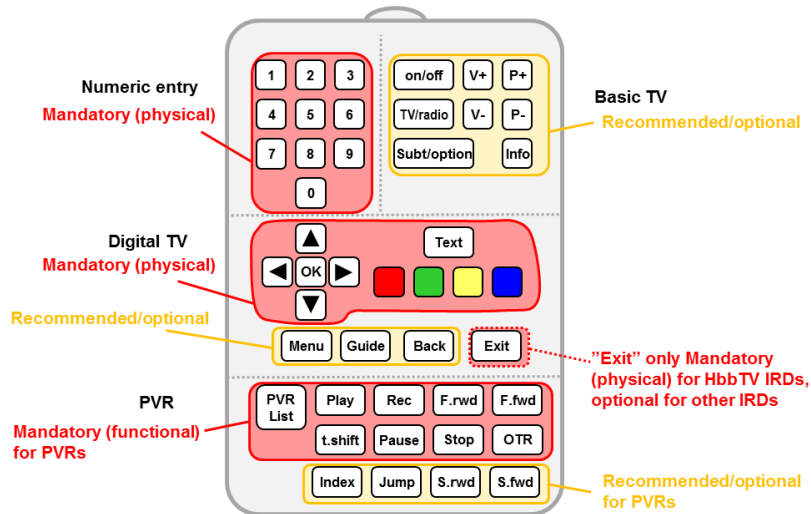
# NorDig T report - IRD: Remote Control

NorDig Excom meeting 29<sup>th</sup> September 2015

## Remote Control chapter under review

- Review Remote Control (very old text 1997/1998, some text unclear, update recommended):
  - Accessibility, to make it easier for these viewer to access these settings.
  - Requirements today for physical keys (arrows, numeric, OK etc...).
- **Proposal for change to functional requirements instead of physical keys for all “keys”.**
- Reported that DTG D-book now has only functional requirements and not on physical keys.
- NorDig T 26 May 2015 – “half-OK” to change to functional RC instead of physical keys, technical possible for (basic) IRDs but what about viewers expectations? Some keys essential for HbbTV.
- **NorDig Excom 26 May 2015: Needs more inputs from members and investigation**
- NorDig T 29 Sep 2015 status: work started, investigate consequences for removing requirements for physical keys and also considering raising some requirements (optional to mandatory, e.g. volume control etc), plan to get members view for such changes.

NorDig v2.4/v2.5/2.5.1 (incl HbbTV)





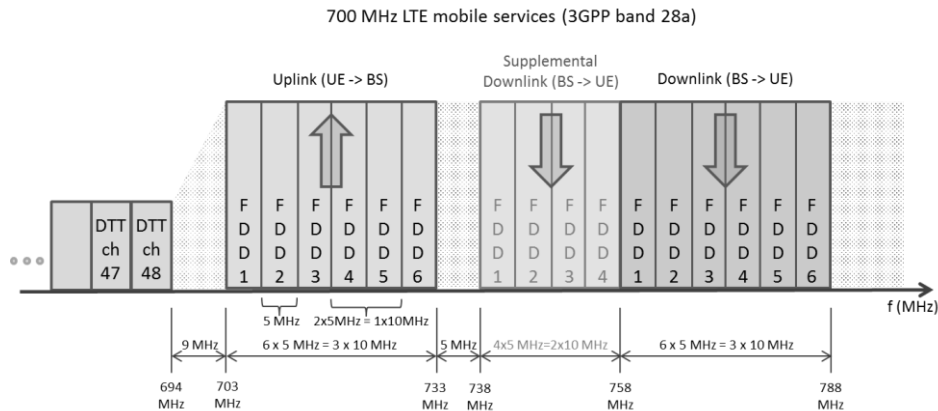
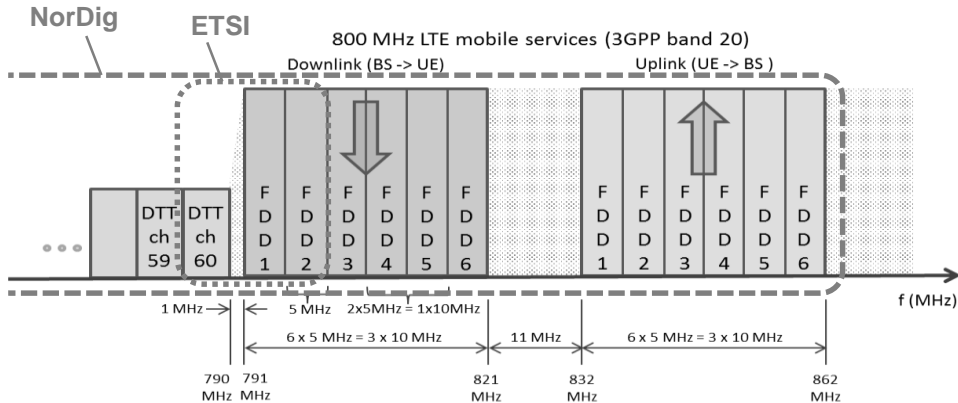
# NorDig T report - IRD: 700MHz LTE interference

NorDig Excom meeting 29<sup>th</sup> September 2015

## Info:

Teracom has 13 May presented inside NorDig T first draft proposal for DTT IRD requirements for immunity against 700MHz LTE interference signals, based on extending existing 800MHz LTE immunity requirements.

29 Sept 2015 status: Teracom still waiting approval to use same reference test signal as ETSI spec (EU RED directive) from “owner” (Arqiva)



- New EU Radio Equipment Directive 2014/53/EU (RED) states: “Radio equipment shall be so constructed that it both effectively uses and supports the efficient use of radio spectrum in order to avoid harmful interference”.
- ETSI has drafted a harmonised standard that incl IRD requirements, test cases and test signals to be used (partly based on NorDig).
- ETSI requirement only for first adjacent channel interference and closest LTE FDD (2x)block
- ETSI level quite low (but higher than current NorDig)

## Teracom proposal:

- Keep NorDig 800MHz LTE requirements + add 700MHz
- Keep requirements for the IRD’s whole freq range and for all LTE blocks (both 700 and 800MHz)
- First align (raise) levels to ETSI now and from 2017/2018 raise again resulting in slightly stricter than ETSI.
- Test cases and test signal still under preparation



# NorDig T report - TV recorder (PVR Lite)

NorDig Excom meeting 29<sup>th</sup> September 2015

## Nordig TV Recorder (PVR Lite) Proposal

- NorDig Excom earlier decision: no need for NorDig T to prepare/work a PVR Lite profile, OK to review if someone/industry comes with a ready proposal.
- 29 Sept 2015 still waiting input proposal from industry (Vestel, Samsung...)
- Comments from other industry, worried that TV Recorder (PVR Lite) would become mandatory for IRDs with recorder capability, example questions:
  - *“Would NorDig PVR then be mandated for all STB’s, also for single tuner STB?”*
  - *“Would NorDig PVR be mandatory for multi-tuner IDTV’s?”*
  - *“Would mandating TV recorder requirement mean that you cannot implement any recording feature, less than what is specified in TV recorder requirements?”*
  - *“Mandating TV recorder would cause longer logo certification time and also cost, testing times/cost is already very high”*



# NorDig T report – NorDig and DTG

NorDig Excom meeting 29<sup>th</sup> September 2015

Harmonise NorDig Unified IRD spec and DTG D-book spec

DTG (CTO Simon Gauntlett) shown interest to harmonise with NorDig.  
Propose regular meetings to identify and share information/work.

Excom view?

E.g. since past:

DTG > NorDig: PVR, SSU

NorDig > DTG: FrontEnd

Simultaneous: MPEG4, SSU



# NorDig T report – website update (1/5)

NorDig Excom meeting 29<sup>th</sup> September 2015

## NorDig website update and mail reflectors (inputs from Peter Molsted)

As presented to Excom 26 May 2015 and accepted by Excom to modernize the NorDig website.

### Proposal:

1. Editing and updating the permanent texts as NorDig organization, contacts, Q&A...

- All texts must be reviewed and evaluated where improvements can be made in the structure and wording
- Continuous updating of content and texts, changes and news

2. Meeting schedules for Excom and NorDigT

- Updated schedules with meetings and other activities in Excom and NorDigT
- The meeting schedules to be placed in the open section such that non Nordig members have the opportunity to see meetings schedules
- Meeting schedules as option for subgroup (in members section)

3. Restructure / redesign document handling for the working groups

- Template document structure for the subgroups
- Easily upload and download of documents

4. Mail reflectors which automatically sends mail when updates on the website

- Mail reflectors for the open section of the website for news and specifications
- Mail reflectors for member part of the website:
- Specific mail reflectors for respectively Excom and NorDigT and subgroups

### Hosting and editor NorDig website

- hosted by Labwise (as today), editor Peter Mølsted

New 29 Sept 2015: basic concept proposal of new NorDig website for Excom to comment



# NorDig T report – website update (2/5)

NorDig Excom meeting 29<sup>th</sup> September 2015

NorDig website new design and structur : [Home / start page, public area](#)

Home	News	Specifications	Verifications	About NorDig	Organisation	Contact	Members
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News:  
List with Title,  
head lines og date

General information about NorDig

Member login  
Excom members  
/  
NorDigT members

Mail reflector:  
Public reflector  
with news  
and  
Specifications.

(mail list  
administered  
by webmaster)

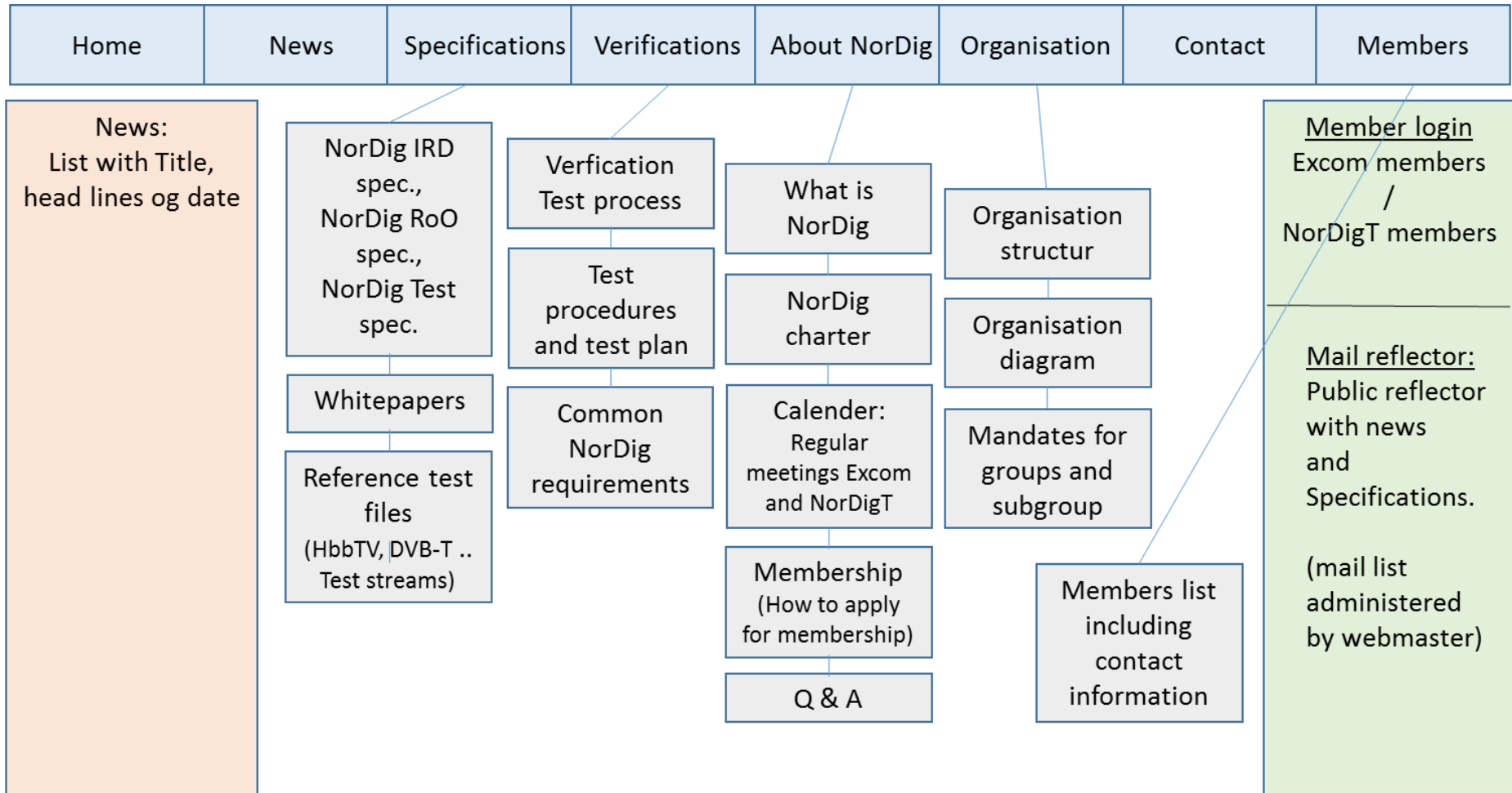




# NorDig T report – website update (3/5)

NorDig Excom meeting 29<sup>th</sup> September 2015

NorDig website new design and structure : [Home / start page, public area](#)

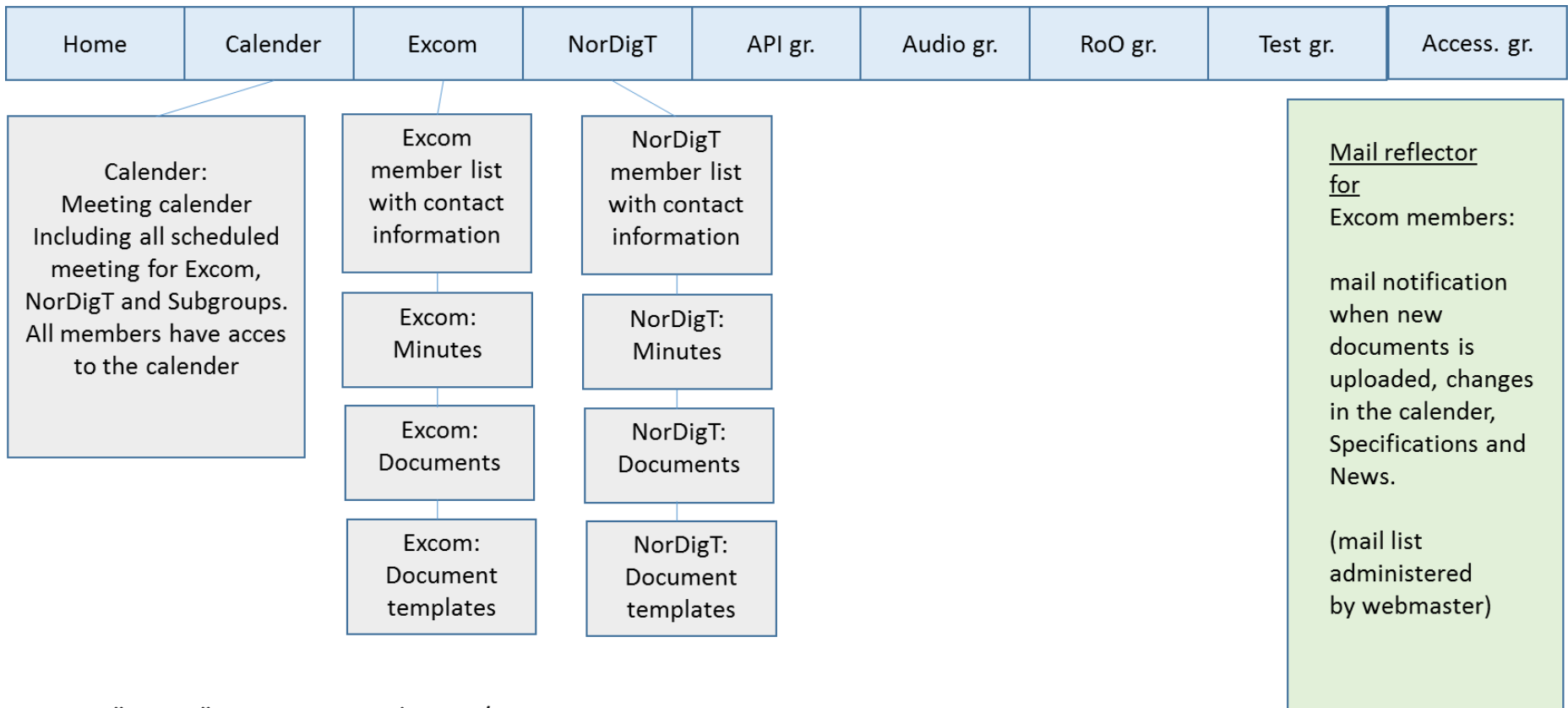




# NorDig T report – website update (4/5)

NorDig Excom meeting 29<sup>th</sup> September 2015

## NorDig website new design and structur : [members area / Excom](#)



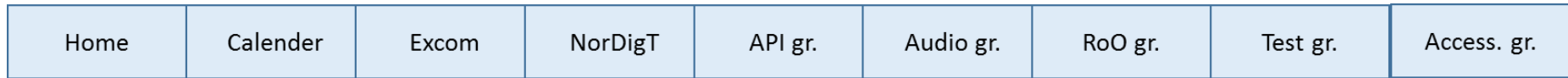
Note: "Home" give access to home / start page



# NorDig T report – website update (5/5)

NorDig Excom meeting 29<sup>th</sup> September 2015

## NorDig website new design and structure : [members area / NorDigT and Subgroups](#)



Calender:  
Meeting calender  
Including all scheduled  
meeting for Excom,  
NorDigT and Subgroups.  
All members have acces  
to the calender

Excom  
member list  
with contact  
information

NorDigT  
member list  
with contact  
information

NorDigT:  
Minutes

NorDigT:  
Documents

NorDigT:  
Document  
templates

API gr.  
member list  
with contact  
information

API gr. :  
Minutes

API gr. :  
Documents

API gr. :  
Document  
templates

Audio gr.  
member list  
with contact  
information

Audio gr. :  
Minutes

Audio gr.:  
Documents

Audio gr. :  
Document  
templates

Mail reflector  
for  
NorDigT and  
Sub group  
members:

mail notification  
when new  
documents is  
uploaded, changes  
in the calender,  
specifications and  
News.  
Only Subgroup  
members get  
notification for activitys  
in there group.

(mail list  
administered  
by webmaster)

Note: Same design and struktur for all subgroups

Peter Mølsted 22.09.2015



## HEVC and TV format: investigation and commercial requirements

- not yet started (plan to start before summer, still much discussions in EBU+DVB+MPEG)
  - TV format: today's or new higher?
  - Codec: video and how about audio, subtitling?
  - I/O interphases (HDMI incl CP)
  - Signaling: DVB draft but nothing for simulcasting (outside DVB)
  - FE? together with modern/latest modulations?
  - Security requirements – most TV supporting HDMI 2.0 also follows MovieLabs HDCP v2.2
  - CA/DRM – together with CI+ v2? together CSA3 or DRM (128bits AES a la DVB)?
- DVB (and MPEG) still working UHD phase 2 (HDR, higher frame rate, “better pixels”...)
- DVB UHD phase 2 survey



# NorDig T report - EPG interchange format

NorDig Excom meeting 29<sup>th</sup> September 2015

## Common EPG/Event interchange delivery file format

- not yet started
- Intension is to create a new subgroup supported by the API subgroup
- Use our consultant Peter Molsted, has very good experience in this area (lower prio than RoO work and inside budget)
- NorDig T plan to invite external (Nordic and Irish) broadcasters and operators (Viasat, Telia, SBS, TV4) into this work to get better acceptance (Excom OK 26 May 2015).



# NorDig T report – NorDig countries/networks

NorDig Excom meeting 29<sup>th</sup> September 2015

List of Countries using NorDig specifications (outside NorDig members), 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 ( <i>blue copy</i> )	Digita
Germany DTT (Media broadcast/TDF)	Based on/reference to NorDig IRD
Georgia DTT	Based on/reference to NorDig IRD (v2.2)



# NorDig T report –

NorDig Excom meeting 29<sup>th</sup> September 2015

## END presentation NorDig-T report

After here some detailed informative slides