

Guidelines for implementation of "last minutes updates", ver. 1.2

This guideline document is 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.

Guidelines for "last minutes update" of program start, duration and changes - "last minutes" refers to shortly before but also afterwards for "correcting" catch-up segmenting.

1. Scope

The document contains guidelines for alerting last minute update of program information for EPG - now and next function (EIT p/f), update On Demand programs with correct program information and for managing automatic production systems. These guidelines do not describe how to implement "last minutes updates" inhouse which is up to the individual company with their different systems, but has the purpose of recommending and supporting implementation of "last minute updates" of program information for distribution.

With "Last minutes update" means update of program start time and program duration (and end time) or changes / cancellation of scheduled programs.

"Last minutes updates" data shall support user requirements and ensure that production systems in the distribution chain work properly with correct data, both for live tv and On demand programming.

The program EPG / Event metadata shall be synchronized on all distribution platforms and receivers in any network to ensure that the user / consumer get a correct and proper product.

2. Requirements

The consumer today expect correct program information on any platform distributed via broadcast or internet, where a program's start time is obviously crucial importance.

For broadcast tv there are existing standards for "last minutes update" of program information. According to the requirements in NorDig specifications the program start time and duration shall be correct within 10 sec. for "now and next" EPG information.

Where for internet distribution there are not defined a standard for "last minutes update" of program information, but it is expected as a natural thing that basic program information like start, duration and changes of programs in the programming schedule are correct.

For correct delivery of Catch up and On demand programs "last minute update" of program start and duration are crucial, where for Catch up live data is used and for generating of On demand files it is important to have the correct metadata.

3. Delivery of metadata

The program metadata for EPG (Electronic Program Guide) are mostly generated from the program scheduling systems (like "What's On") to be able to deliver program information minimum 7 days ahead or more.

The program scheduling systems are typical not live updated with minor changes in program start time and duration (less than 10 minutes) and are normally not updated outside normal working hours or in weekends expect if there are big changes in the program schedule.

Therefore, metadata for "last minutes update" must be delivered from the Playout system as it is the only place in the production chain where you can find accurate data for this use.

But the challenge is to synchronize between metadata from the Scheduling system and the Playout system and enable live data for distribution fast enough.

4. Distribution of metadata including "last minute update"

The broadcast / content provider shall according to the new NorDig standard for EPG / Event metadata exchange format, deliverer program information in TV-Anytime standard which must contain "last minute update" data.

Some Broadcasters delivering metadata to the a broadcast distribution systems, often use a format which is a subset of TV-Anytime to have a data light format for direct insert in the SI system, and deliver 2 feeds, one for schedule information (7 days ahead or more) and one with "last minute update" for the actual 24 hours for the SI system.

To get a quick update and minimize delays in the distribution chain the feed with "last minute update" contains only unique program id, start time and duration, which is inserted in the SI stream for EIT p/f and merged with the Schedule information so "now and next" and the program guide are updated.

For distribution via internet the broadcaster / content provider can use a Webservices, a Push services or other delivery mechanisms where it is possible for the recipient of EPG / Event metadata to retrieve data continuously in a way that ensure the update within maximum 10 seconds.

5. Information about TV-Anytime documentation and version used by NorDig

NorDig is using ETSI TS 102 822-3-1. For information about versions, see the main implementation guideline Nordig TVA Implementation Guidelines v[...]

6. Present/Following messages

Present/Following messages (EIT p/f) has high priority. Therefor the schedule span may include only present and following program, and the information should be set to a minimum. The TVAMain element include a type attribute which should be set to `type="presentFollowing"` for this kind of messages.

Present/following message triggered from the playout system, will ideally have the exact same date time as the actual start time of the first/present program. Ideally it will also be the same as the start attribute of the schedule element. `<tva:Schedule serviceIDRef="NRK1" start="2017-10-03T07:45:01" end="2017-10-03T08:15:15">`

Both present and following program can be different from previous announced in EPG (EIT schedule), and it may not fit into the rest of the earlier scheduled information.

It is highly recommended to update the EPG (Electronic Program Guide) as soon as possible to get a complete schedule when EPG is changed.

7. Example file

To avoid character set problems when copy/paste text, there is made an example file for this messages, see `TVA_Nordig_exempladata_PF[...].xml`

8. Delivery of Present/Following messages

The broadcaster/publisher and stakeholder has to agree push and/or pull, and will it always be delivered or only if previous schedule is not correct.