Zvooq Delivery Specification v0.9.3

Media Formats

We generally prefer lossless formats or formats with highest available quality.

Audio

General Restrictions

- 44–192 kHz
- 1–8 channels
- 16–32-bit per channel
- single file size up to 1200GB

Recommended Codec

- FLAC 1.2.1 (17-Sep-2007)
- encode with **--best**
- encode with **--best -e** if you can
- no tags whatsoever
- minimum 44 kHz, 16-bit, stereo
- up to 192 kHz, 32-bit, 8 channels

Supported Codecs

- Uncompressed LPCM (WAV)
- Apple Lossless (ALAC)
- MPEG-4 Audio Lossless Coding (ALS)
- Monkey's Audio (APE)
- Meridian Lossless Packing (MLP)
- OptimFROG Lossless (OFR)
- OptimFROG DualStream (OFS)
- True Audio (TTA)
- Shorten (SHN)
- Michael Bevin's lossless audio (LA)

Lossy Codecs

We generally do not accept content in lossy formats (such as MP3), except in cases when the original digital and analogue masters have been provably lost.

We do not accept encoded end-user assets for several reasons
- they usually don't meet our quality standards
- it is a costly process to verify their adherence
- we will need to encode to different formats using different codecs

Images

We require at least one hi-res front cover image per release, except in cases where all images have been provably lost.

We also recommend to include hi-res images of back cover, booklet pages, external packaging, and any other image directly and specifically associated with the release to maintain user engagement.

We generally recommend to submit images in the very format you receive or produce them, to avoid unnecessary transcoding.

General Restrictions
- at least 1300 x 1300 per pane; 500 x 500 acceptable in exceptional cases
- RGB colorspace, CMYK acceptable
- at least 300 dpi; 72 dpi acceptable in exceptional cases
- file size up to 4GB

Recommended Formats
- PNG
- TIFF lossless (PackBits/LZW)
- JPEG 2000 lossless

Supported Formats
- BMP (Windows bitmap)
- PDF
- JPEG / JFIF
- JPEG 2000

Video

We support all popular video formats. In case of a number of options, we choose best available quality. If in doubt, provide versions with largest file sizes.

Data Transfer

In all cases, we prefer online transfer via Internet. If your Internet link will not allow for the transfer of your whole catalog in under 2 weeks, we can discuss delivery via hard drives. For reference a 100Mbit/s link can deliver about 200 000 lossless tracks per week.

Technologies

- we prefer if you host files on your servers and give us HTTP, FTP, RSYNC or SFTP access and update notifications
- if you prefer to upload to our servers we'll arrange plain FTP, RSYNC or SFTP access to our server farm, you'll receive host name, login and password
- if you're concerned with security around your content, please opt for SFTP or RSYNC over SSH and use public key authentication, instead of passwords
- we have over 10Gbit/s aggregate bandwidth at DE-CIX, the world largest traffic exchange point, there should be no problem to deliver to our servers from any point in Europe or North America at the speed of your link
- both IPv4 and IPv6 connectivity is supported at full speed

File Organization

- if your workflow is batch-oriented, you can use a two-level directory structure
  - *batch_id/UPC/UPC.xml, batch_id/UPC/ISRC.flac,* for example:
  - batch_201103161301/077779604814/077779604814.xml
  - batch_201103161301/077779604814/077779604814.png
  - batch_201103161301/077779604814/SEAMA9301022.flac
  - batch_201103161301/077779604814/SEAMA9301023.flac
  - …
- otherwise, we recommend using a one-level directory structure, as described above, just without the first component:
  - *UPC/UPC.xml, batch_id/UPC/ISRC.flac,* for example:
  - 077779604814/077779604814.xml
  - 077779604814/077779604814.png
  - 077779604814/SEAMA9301022.flac
  - 077779604814/SEAMA9301023.flac
  - …
- if you're not able to assign UPC or ISRC numbers, we recommend contacting relevant organizations and start assigning them as soon as possible, meanwhile you can use any identifiers for your releases and tracks, which are guaranteed to be unique and stable across metadata updates.

Notifications

- you will be set up with a dedicated e-mail address to send notifications to

- notifications should be sent for new releases, expired (taken down) releases, and corrected releases
- at a minimum, notifications should contain
  - batch_id (if applicable)
  - list of relevant UPC numbers (release identifiers)

HDD Delivery

When delivering content on hard drives, you can use file organization as described above.

File systems supported
- **FAT32** (Windows)
- **NTFS** (Windows)
- **ext2**, **ext3**, **ext4** (Linux)
- **UFS**, **UFS2** (FreeBSD)
- **exFAT** (Windows) — not recommended
- **HFS+** (Mac OS X) — not recommended

Other considerations
- We recommend strongly against using any kind of encryption, but we do support all versions of **TrueCrypt**
- If you have to use multiple hard drives, we recommend leaving about 5% space free on each drive
- Consumer grade 4TB or 3TB drives are recommended
- For external drives, USB 3.0 interface is recommended
- For internal drives, SATA 3.x (6Gbit/s) or SATA 2.0 (3Gbit/s) interfaces are recommended
- Postal address for delivery may depend on the number of drives and will be provided to you upon contacting us

Metadata

Correct and comprehensive metadata is critical to our successful operation. We are partnering with a growing number of metadata providers to enrich incoming information and achieve better reliability when processing it.

We are able to adapt our system to any properly designed format very quickly, but we recommend using popular formats to ensure best quality and transfer reliability.

We recommend using the DDEX standards stack for all kinds of metadata exchange.

Zvooq DPID is: **PA-DPIDA-2010120602-L**

If you don't find it feasible to build a system producing well-formed metadata, we recommend signing up for a free account at http://musicbrainz.org/ and entering your releases through the web interface. As a commercial client of **MusicBrainz**, we'll get the data you enter in a fully automated way within a few hours from your submission.

Stable identifiers
You should provide stable identifiers for each release and track.

Stable identifiers for releases should:
- Uniquely identify releases within entire catalog
- Stay unchanged across metadata updates

Stable identifiers for tracks should:
- Uniquely identify tracks within release which contains it
- Stay unchanged across metadata updates

Stable identifiers enable us to unambiguously and reliably apply metadata updates and takedown notices to tracks and releases, avoiding error-prone string matching techniques.

Examples of stable identifiers for releases include product codes (UPC, EAN, etc) and global release identifier (GRid) as defined by IFPI. You can also use your own identification mechanism but you need to be sure it conforms to the requirements described above.

However it is hard to find commonly accepted and recommended way to provide stable identifiers for tracks. The most obvious solution to use International Sound Recordings Code (ISRC) is not suitable for that purpose because there is a big possibility of having a release with more than one track assigned to the same ISRC (different mastering versions of a track on a single release is a usual situation). Thus the preferred approach here is to use custom identification mechanism.
If you're using custom stable identifiers and DDEX, they should go in ProprietaryId elements.

In case you use Musicbrainz for managing your music catalog metadata it already supports stable identifiers for releases and tracks and thus already conforms to this specification.

Supported Containers
- XML
- JSON
- TSV (tab-separated values)
- CSV (comma-separated values)
- XLS

Supported Formats
- DDEX (all types)
- custom XML formats of all major labels
- Discogs XML
- MusicBrainz XML and relational schema
- BeatPort XML
- iTunes XML
- Juno Downloads XML
- Rovi TSV

Changelog

v0.9.3 (2011-11-11)

- require stable identifiers in metadata

v0.9.2 (2011-11-06)

- HDD delivery

v0.9.1 (2011-07-14)

- specify Zvooq DDEX DPID
- introduce page breaks for better readability
- more supported XML formats

v0.9 (2011-02-25)

- first public version