Usage example

October 9, 2015

1 How to access the sound data

In this short notebook, we show how to access the sound data and get specific sounds.

```
In [1]: from lxml import etree
```

```
In [31]: # Load the data
         xml  = etree.parse('./3-results/results.xml')
         root = xml.getroot()

         def print_xml(el):
             "Helper function to show XML."
             return print(etree.tostring(el).decode('unicode_escape'))
```

2 Selecting sounds with particular properties

We can use XPATH-expressions to find sounds with particular properties, e.g. with a certain duration or bitdepth.

```
In [32]: short_sounds = root.xpath('./sound[starts-with(@duration,"0.")]')
         bitdepth_24  = root.xpath('./sound[@bitdepth="24"]')
```

Or use the metadata of the sound to find the recordings you're after:

```
In [33]: def sounds_by_description(word):
             "Find sounds by their description."
             for sound in root.iterfind('sound'):
                 description = sound.find('description')
                 if word in description.text:
                     yield sound
```

```
In [34]: sounds_periodically = sounds_by_description("periodically")
         print_xml(next(sounds_periodically))
```

```
<sound id="7166" name="pwm11.wav" url="https://www.freesound.org/people/rossb/sounds/7166/" type="wav"
    <description>glitchy modem-type noises #8, changing periodically a bit like sample and hold, random
    <ratings>
      <clarity count="x">0</clarity>
      <webrating count="17">3.794117647</webrating>
    </ratings>
    <author-tags>
      <tag label="glitch"/>
      <tag label="noise"/>
      <tag label="noisy"/>
    <tag label="synthesized"/>
  </author-tags>
  <crowd-tags>
    <tag label="beep" count="2" children="1">
      <raw label="beep" count="2"/>
    </tag>
    <tag label="loading screen noise" count="1" children="1">
      <raw label="loading screen noise" count="1"/>
    </tag>
    <tag label="modem" count="2" children="1">
      <raw label="modem" count="2"/>
    </tag>
    <tag label="feedback" count="1" children="1">
      <raw label="feedback" count="1"/>
    </tag>
    <tag label="whine" count="1" children="1">
      <raw label="whine" count="1"/>
    </tag>
    <tag label="fizz" count="1" children="1">
      <raw label="fizz" count="1"/>
    </tag>
    <tag label="electronic noise" count="1" children="1">
      <raw label="electronic noise" count="1"/>
    </tag>
    <tag label="video" count="1" children="1">
      <raw label="video" count="1"/>
    </tag>
    <tag label="bleeping" count="1" children="1">
      <raw label="bleeping" count="1"/>
    </tag>
    <tag label="electrical" count="2" children="1">
      <raw label="electrical" count="2"/>
    </tag>
    <tag label="old computer" count="3" children="1">
      <raw label="old computer" count="3"/>
    </tag>
    <tag label="buzz" count="1" children="1">
      <raw label="buzz" count="1"/>
    </tag>
    <tag label="static" count="2" children="1">
      <raw label="static" count="2"/>
    </tag>
    <tag label="bellows" count="1" children="1">
      <raw label="bellows" count="1"/>
    </tag>
    <tag label="arcade game" count="2" children="1">
      <raw label="arcade game" count="2"/>
    </tag>
    <tag label="squeal" count="1" children="1">
      <raw label="squeal" count="1"/>
    </tag>
  </crowd-tags>
</sound>
```

```
In [35]: def sounds_by_author_tag(tag):
             "Find sounds by original tags."
             for sound in root.iterfind('sound'):
                 if sound.xpath('./author-tags/tag[@label="' + tag + '"]'):
                     yield sound
```

```
In [36]: vintage_sounds = sounds_by_author_tag('vintage')
         print_xml(next(vintage_sounds))
```

```
<sound id="3639" name="futuretrocomputing_02_suonho.wav" url="https://www.freesound.org/people/suonho/so
    <description>firstly i've created a few selfmade patcheswith a couple of free virtual analog vsti (
    <ratings>
      <clarity count="x">0</clarity>
      <webrating count="36">4.361111111</webrating>
    </ratings>
    <author-tags>
      <tag label="vintage"/>
      <tag label="beep"/>
      <tag label="synthesizer"/>
      <tag label="analog"/>
      <tag label="commnication"/>
      <tag label="computing"/>
      <tag label="digital"/>
      <tag label="effect"/>
      <tag label="film"/>
      <tag label="future"/>
      <tag label="fx"/>
      <tag label="lab"/>
      <tag label="movie"/>
      <tag label="oldschool"/>
      <tag label="retro"/>
      <tag label="sci-fi"/>
      <tag label="scoring"/>
      <tag label="signal"/>
      <tag label="soundeffect"/>
      <tag label="soundesign"/>
      <tag label="soundtrack"/>
      <tag label="space"/>
      <tag label="synth"/>
      <tag label="bleep"/>
      <tag label="computer"/>
    </author-tags>
    <crowd-tags>
      <tag label="synthetic" count="1" children="1">
        <raw label="synthetic" count="1"/>
      </tag>
      <tag label="machine" count="1" children="1">
        <raw label="machine" count="1"/>
      </tag>
      <tag label="glitch" count="1" children="1">
        <raw label="glitch" count="1"/>
      </tag>
      <tag label="electronic" count="2" children="1">
        <raw label="electronic" count="2"/>
      </tag>
      <tag label="abstract" count="1" children="1">
        <raw label="abstract" count="1"/>
      </tag>
      <tag label="random" count="1" children="1">
        <raw label="random" count="1"/>
      </tag>
      <tag label="beep" count="2" children="1">
        <raw label="beep" count="2"/>
      </tag>
      <tag label="computerized" count="1" children="1">
        <raw label="computerized" count="1"/>
      </tag>
      <tag label="computer" count="1" children="1">
        <raw label="computer" count="1"/>
      </tag>
      <tag label="robotic" count="1" children="1">
        <raw label="robotic" count="1"/>
      </tag>
      <tag label="bleeping" count="2" children="1">
        <raw label="bleeping" count="2"/>
      </tag>
      <tag label="gurgling" count="1" children="1">
        <raw label="gurgling" count="1"/>
      </tag>
      <tag label="technology" count="1" children="1">
        <raw label="technology" count="1"/>
      </tag>
      <tag label="spaceship" count="1" children="1">
        <raw label="spaceship" count="1"/>
      </tag>
    </crowd-tags>
  </sound>
```

```
In [ ]:
```