Call for Entries: Sonification Competition for ICAD 2012

Listening to the World Listening

Composers, sound artists, and sonification researchers are invited to create sonifications for the ICAD 2012 sonification competition.

Theme

ICAD 2004 titled its sonification competition 'Listening to the Mind Listening' and invited entrants to sonify EEG data captured while a subject was listening to music. The ICAD 2012 competition is inspired by this same idea: music (or sound) about listening to music. It is also inspired by the radical changes over the past decade in how we listen to music and how we share our listening activities with others. As portable media players and always-connected smartphones have become our primary listening platforms, social media services have become our primary sharing platforms.

This competition adopts the theme 'Listening to the World Listening' as it challenges us to explore what we can learn about listening through the analysis and sonification of social media data about listening.

There is no static data set for this competition; instead, entrants are invited to use a set of data APIs to obtain social media listening data. Use of a Twitter Music Trends data feed, which aggregates music listening data from Twitter by artist, is required. Entrants may optionally gather related data about the tweets themselves from the Twitter API, and about the referenced artists from the MusicBrainz and Echo Nest APIs. Detailed information about each API is at the end of this document.

Deadline for submissions: March 1, 2012

Notification of finalists: April 1, 2012

Submission Requirements:

Sonifications may be fixed-media audio files, interactive software programs or web sites, smartphone apps, musical performances, or sound installations. They may sonify the data in real time or out of real time. They may work with as little as a single set of fifty artists from

Twitter Music Trends or as much as several months worth of data collected across all of the APIs.

Submissions must include an audio or video recording, no more than five minutes in length, of the complete sonification, excerpts from the sonification, or documentation of the sonification, as appropriate. Submissions must also include a 2-4 page statement, following the ICAD 2012 paper template, that describes the techniques used to create the sonification and the motivations behind them.

All submissions must be made electronically through the ICAD 2012 web site:

http://icad2012.icad.org

All questions should be addressed to Jason Freeman, ICAD 2012 Music Chair:

jason.freeman@gatech.edu

Jury, Finalists, and Winners:

A jury will select finalists to be featured during ICAD 2012, and the winner will be announced during the conference. The statements of each finalist will also be published in the ICAD conference proceedings.

Jury:

Alberto de Campo, Professor of Computational Art, Universität der Künste Berlin

R. Luke Dubois, Assistant Professor of Integrated Digital Media, NYU-Poly

Adam Lindsay, chief scientist, SocialGenius

Brian Whitman, co-founder and CTO, The Echo Nest

The Data Sources:

Twitter Music Trends:

Adam Lindsay and our friends at SocialGenius have created a web service, Twitter Music Trends, which greatly simplifies the process of extracting listening data from Twitter. According to Adam: "It listens to a vast

selection of music-related tweets, and automatically tries to detect if each is actually discussing a musician or group." It then amasses this information in three forms: a **daily** trend of popular artists; the **trending** artists at the current moment; and the **latest** artists to be identified from the Twitter stream. The data for each can be accessed as both a simple visualization and as JSON data:

http://twittermusictrends.com/daily

http://twittermusictrends.com/daily.json

http://twittermusictrends.com/trending

http://twittermusictrends.com/trending.json

http://twittermusictrends.com/latest

http://twittermusictrends.com/latest.json

The JSON data includes the name of each artist, the artist's musicbrainz and echonest ids, the ids of associated tweets, and (for daily and trending), a score that ranks the Twitter popularity of the artist relative to the most popular artist on the list (1.0 is most popular). Here is an example of a JSON entry for an artist:

```
{"mbid": "musicbrainz:artist:4b7aee58-83e6-48f1-b8df-
dcc473faf613", "score": 0.6151315789471865, "echonest_id":
"ARGSFKD119B866928A", "name": "A Rocket to the Moon"},
{"recent_tweet_ids": ["129234137939853312", "129234165479636992",
"129234176082841600", "129234226431275009", "129234253761351681",
"129234487958712321", "129235090504024064", "129235430301384704",
"129235640859639809", "129236116149772289"]}
```

Each list contains fifty artists. The daily and trending data is updated every 5 seconds. The latest data is updated every 2 seconds.

SocialGenius places a few restrictions on your use of the data. It cannot be redistributed or used for commercial purposes. It may be used under the Open Data Commons Attribution License. They expect all downstream usage of the data to be share-alike.

No registration is necessary to access this data.

Twitter:

The Twitter REST API provides access to information about each tweet whose ID is listed in the Twitter Music Trends JSON data.

To access JSON data about a tweet, simply use an HTTP GET request like this:

http://api.twitter.com/1/statuses/show.json?id=129234244630347776

substituting the ID number with that of the tweet you wish to obtain. The response will look something like this:

```
{"place":null,"retweet_count":
0,"in_reply_to_screen_name":null,"geo":null,"retweeted":false,"in
_reply_to_status_id":null,"in_reply_to_status_id_str":null,"coord
inates":null,"user":
{"is_translator":false,"geo_enabled":true,"profile_background_til
e":true,"profile_background_image_url_https":"https:\/\/
si0.twimg.com\/profile_background_images\/73197647\/Ngang-
Ngong_2.jpg","protected":false,"location":"Eindhoven","follow_req
uest_sent":null,"friends_count":
86,"profile_sidebar_fill_color":"21211a","name":"Matheus
Santoso","url":null,"utc_offset":
3600,"profile_sidebar_border_color":"212021","profile_image_url_h
ttps":"https:\/\/si0.twimg.com\/profile_images\/680989167\/
AStyle-Classybuanget_normal.jpg","description":"No body knows,
only God knows","following":null,"listed_count":
0,"profile_use_background_image":true,"created_at":"Sat Jun 06
13:14:00 +0000
2009","profile_text_color":"666666","screen_name":"matheussantoso
","default_profile":false,"show_all_inline_media":false,"contribu
tors_enabled":false,"profile_background_image_url":"http:\/\/
a1.twimg.com\/profile_background_images\/73197647\/Ngang-
Ngong_2.jpg","id_str":"45126446","notifications":null,"favourites
_count":
4,"profile_link_color":"2FC2EF","default_profile_image":false,"st
atuses_count":922,"verified":false,"time_zone":"Amsterdam","id":
45126446,"lang":"en","profile_background_color":"000000","followe
rs_count":68,"profile_image_url":"http:\/\/a3.twimg.com\/
profile_images\/680989167\/AStyle-
Classybuanget_normal.jpg"},"truncated":false,"in_reply_to_user_id
_str":null,"created_at":"Wed Oct 26 16:33:39 +0000
2011","contributors":null,"id_str":"129234244630347776","source":
"\u003Ca href=\"https:\/\/chrome.google.com\/extensions\/detail\/
encaiiljifbdbjlphpgpiimidegddhic\" rel=\"nofollow\"\u003ESilver
Bird\u003C\/a\u003E","id":
129234244630347776,"in_reply_to_user_id":null,"favorited":false,"
text":"#np never gonna leave this bed - maroon 5"}
```

No registration with Twitter is necessary to obtain this data.

Further documentation on this method call is available here:

https://dev.twitter.com/docs/api/1/get/statuses/show/%3Aid

Further documentation on the entire Twitter REST API is available here:

https://dev.twitter.com/docs/api

MusicBrainz:

The MusicBrainz REST API provides additional information about each artist whose MusicBrainz ID is listed in the Twitter Music Trends JSON data.

To access XML data about an artist, simply use an HTTP GET request like this:

http://musicbrainz.org/ws/2/artist/4b7aee58-83e6-48f1-b8df-dcc473faf613

substituting the ID number with that of the artist you wish to obtain. The response will look something like this:

```
<?xml version="1.0" encoding="UTF-8"?><metadata xmlns="http://
musicbrainz.org/ns/mmd-2.0#"><artist type="Group"
id="4b7aee58-83e6-48f1-b8df-dcc473faf613"><name>A Rocket to the
Moon</name><sort-name>Rocket to the Moon, A</sort-name><life-
span><begin>2006</begin></life-span></artist></metadata>
```

You can request additional information about the artist by adding parameters to the end of the request, e.g.

http://musicbrainz.org//ws/2/artist/4b7aee58-83e6-48f1-b8df-dcc473faf613?inc=recordings+releases+release-groups+works

The complete API documentation is available here:

http://musicbrainz.org/doc/XML_Web_Service/Version_2

No registration with MusicBrainz is necessary to obtain this data.

Echo Nest:

The Echo Nest REST API provides additional information about each artist whose Echo Nest ID is listed in the Twitter Music Trends JSON data.

To access JSON data about an artist, simply use an HTTP GET request like this:

http://developer.echonest.com/api/v4/artist/profile?api_key=<your_key>&id=AR481V71187B98AE81&bucket=hotttnesss

substituting the ID number with that of the artist you wish to obtain and the API key for your developer API key. The response will look something like this:

```
{"response": {"status": {"version": "4.2", "code": 0, "message":
"Success"}, "artist": {"hotttnesss": 0.45486298902796507, "id":
"AR481V71187B98AE81", "name": "Cire"}}}
```

You can add multiple "bucket" terms to the same query to retrieve different information about the artist, including: audio, biographies, blogs, doc_counts, familiarity, hotttnesss, images, location, news, reviews, songs, terms, urls, video, and years_active.

The basic documentation for the REST call is available here:

http://developer.echonest.com/raw_tutorials/getting_data.html

The full documentation of the REST API is available here:

http://developer.echonest.com/docs/v4/artist.html

Use of the Echo Nest API requires a (free) API key, which can be obtained here:

http://developer.echonest.com/account/register

You may also wish to use the Echo Nest Python API and/or the Echo Nest Remix API (also in Python):

https://github.com/echonest/pyechonest/

http://code.google.com/p/echo-nest-remix/