

To: "Jim Schrempp" <j\_schrempp@audiblemagic.com>  
From: "Franck Chastagnol" <fchastagnol@youtube.com>  
Cc: "v\_ikezoye@audiblemagic.com" <v\_ikezoye@audiblemagic.com>  
Bcc:  
Sent Date: 2006-08-17 18:29:40 GMT  
Subject: Re: YouTube evaluation questions

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thanks Jim - I think we will need this.

Franck

On Aug 17, 2006, at 8:51 AM, Jim Schrempp wrote:

> Hi Franck,  
>  
> We can select fingerprints to use based on the source. We get  
> feeds from the major labels so I think that works for you.  
>  
> In the IDResponse we currently return just the minor label that is  
> associated with the specific track we identify. We could make a  
> small modification on our side to return the source of the  
> fingerprint, which would be the major label.  
>  
> Cheers,  
> Jim  
>  
>  
> Audible Magic Corporation  
> 408.399.6405 x105  
>  
> This message is intended for the use of the addressee only  
> and may contain confidential information and trade secrets  
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> prohibited.  
>  
>  
>  
> -----Original Message-----  
> From: Franck Chastagnol [mailto:fchastagnol@youtube.com]  
> Sent: Wednesday, August 16, 2006 9:38 AM  
> To: Jim Schrempp  
> Cc: v\_ikezoye@audiblemagic.com  
> Subject: Re: YouTube evaluation questions  
>  
> Hi Jim,  
>  
> Thanks for the answers.  
> I'll look more in details at how we will be managing our own  
> reference fingerprint DB.  
>  
>  
> By owner I meant which media company represents the artist  
> (Warner, Sony, Viacom,...).  
> Initially, we will ask you to populate the reference fingerprint  
> DB with the catalog of only one of those companies.  
> (BTW, I assume this is something you can do, correct ?) But as we  
> sign new contracts, we will add catalogs from other companies.

> So from fingerprint match API response, we would need a way to  
> tell if it is a match for a Warner item, a Sony item, etc...  
>  
> Thanks,  
> Franck  
>  
> On Aug 15, 2006, at 2:47 PM, Jim Schrempp wrote:  
>  
>> Hi Franck,  
>>  
>> I understand your point about the extra work, but our search is  
> so  
>> fast that one fingerprint here or there doesn't make any  
> difference.  
>> In fact, 5000 signatures doesn't even change the response time.  
> When  
>> you decide to delete 25,000 signatures then that might be worth  
> doing  
>> - maybe - and at that point you can rebuild the databases (which  
> is  
>> pretty quick) and FTP the updated amdbms over.  
>>  
>> Our database always returns track\_title and track\_artist. If the  
> track  
>> is part of an album, then we also populate album\_title,  
> album\_artist,  
>> label.  
>>  
>> If the album has a UPC (many do not) then we return it.  
>>  
>> If the track is for sale through MusicNet, then we can return  
> the  
>> MNetID that you can use to link into their system.  
>>  
>> About 50% of our track entries have the Recording Owner field  
>> populated. Most of the entries from the major labels have a  
> value for  
>> this.  
>>  
>> A big question is what you mean by "owner". One master recording  
> can  
>> have many owners through its lifetime. One master recording may  
> appear  
>> on several different albums - the publisher of the most recent  
> album  
>> is not necessarily the current "owner". If our reference  
> database has  
>> a fingerprint of the same master recording from two different  
> album,  
>> the one used in the identification is arbitrary.  
>>  
>> We do offer a service that will add incremental information to  
> the  
>> IDResponse XML. We can add album information for all of the  
> albums  
>> that contain the identified master recording. We do this for one  
>  
>> customer today and it would require just a small amount of

> tweaking  
>> for us to deploy it for you.  
>>  
>> You might also be most interested in whether the identified song  
> was  
>> owned by one of the big five record labels. We could create a  
> service  
>> like this for you.  
>>  
>> As to the other metadata fields in the XML... The extent of the  
>> coverage depends entirely on the source we used. We are always  
> working  
>> to improve the completeness of these fields in our database.  
> Once we  
>> have made an identification, we extract the associated metadata  
> from  
>> our master database. It is pretty easy for us to include  
> additional  
>> metadata fields in the IDResponse.  
>>  
>> Are there some that you have a particular interest in?  
>>  
>> Best Regards,  
>> Jim  
>>  
>>  
>>  
>>  
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>>  
>> -----Original Message-----  
>> From: Franck Chastagnol [mailto:fchastagnol@youtube.com]  
>> Sent: Tuesday, August 15, 2006 1:58 PM  
>> To: Jim Schrempp  
>> Cc: v\_ikezoye@audiblemagic.com  
>> Subject: Re: YouTube evaluation questions  
>>  
>> Hi Jim,  
>>  
>> See answers inline.  
>>  
>> Also, if you would have any documentation that describes the  
> list of  
>> fields available in your metadata DB (and their meaning), that  
> would  
>> help greatly YouTube making a decision regarding whether or not  
> we  
>> would need this metadata information.  
>>

>> Thanks,  
>> Franck  
>>  
>> On Aug 15, 2006, at 6:32 AM, Jim Schrempp wrote:  
>>  
>>> Hi Franck,  
>>>  
>>> WRT deleting one fingerprint, is there a reason that you could  
>> not  
>>> just ignore an identification that is made with a fingerprint  
>> you wish  
>>> was deleted? It seems like either we have to maintain this  
> state  
>> or  
>>> you do, and this is more connected to your processes than ours.  
>> Let me  
>>> know your thoughts.  
>>  
>> it seemed more effective to me to delete the fingerprints from  
> the  
>> reference DB.  
>> this way the correlation server does not have to run correlation  
>  
>> against that deleted fingerprints.  
>>  
>>> As to the XML, YouTube was interested in the bare bones service  
>> so our  
>>> deal with you does not include the actual metadata identity of  
>> what we  
>>> find. You are currently running against one of our demo servers  
>> so you  
>>> see the metadata. When you move into production most of the  
>> fields  
>>> will say "content was identified, no metadata is available".  
> You  
>> know  
>>> that a positive id was made by the status  
>>> 2006 in the tag <IdResponse><IdStatus>  
>>>  
>>> The <AmItemId> in the response is your best unique identifier  
>> from us.  
>>> It never changes. Never ever.  
>>  
>> Make sense.  
>> Does the <RecordingOwner> field indicates to which company  
> (Warner,  
>> Sony) owns the right for the song ?  
>>  
>>  
>>> I hope this helps. Feel free to ask any other questions you may  
>> have.  
>>>  
>>> Best Regards,  
>>> Jim  
>>>  
>>> Audible Magic Corporation  
>>> 408.399.6405 x105  
>>>

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>>> and may contain confidential information and trade secrets  
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>>> prohibited.  
>>>  
>>>  
>>> -----Original Message-----  
>>> From: Franck Chastagnol [mailto:fchastagnol@youtube.com]  
>>> Sent: Monday, August 14, 2006 5:45 PM  
>>> To: Jim Schrempp  
>>> Cc: thom@musclefish.com; 'Frey Waid';  
> v\_ikezoye@audiblemagic.com  
>>> Subject: Re: YouTube evaluation questions  
>>>  
>>>  
>>> thanks Jim for the answers - it makes sense.  
>>>  
>>> In terms of API to add/delete fingerprints, I think we may need  
>>> something a bit more flexible than sending to AudibleMagic by  
>> FTP the  
>>> whole fingerprint archive.  
>>> An HTTP POST API (or equivalent) that allows to add/delete 1  
>>> fingerprint would be much easier for us to integrate with.  
>>>  
>>>  
>>> A few more questions regarding your fingerprinting API:  
>>> a. do you have any documentation for this API I could take a  
>> look at  
>>> ? I'm particularly interested in a definition fro all the  
> fields  
>>  
>>> returned in the XML response.  
>>>  
>>> b. If there is a match, can we know to which media company it  
>>> belongs to ? (Warner, Sony, ...) The XML reponse includes a  
>> field  
>>> <RecordingOwner> but in my tests, it was not populated.  
>>>  
>>> c. You mentioned ISRC is not a good choice as unique ID.  
>>> The XML response has a field <SigGUID>. Is this the unique ID  
>> of the  
>>> reference fingerprint that matched the sample we submitted ?  
>>> Is this SigGUID guaranteed to be permanent over time (e.g. if  
> we  
>> store  
>>> it in our DB, we can refer to it later and it will point to the  
>> same  
>>> reference fingerprint in your DB) ?  
>>>  
>>> Thanks,  
>>> Franck  
>>>  
>>>  
>>> On Aug 14, 2006, at 2:05 PM, Jim Schrempp wrote:  
>>>  
>>>> Hi Franck,  
>>>>

>>>> In our discussions with YouTube it was made clear to us that  
>>> these  
>>>> fingerprints of your own content needed to remain completely  
>>> separate.  
>>>> We were not to have access to any metadata about them.  
>>>> As a result, we planned to use the following available  
> process.  
>>>>  
>>>> 1. We would provide you with two command line utilities.  
>>>>  
>>>> 1a. The first will create a reference fingerprint file from an  
>>> MP3 or  
>>>> WAV file (extension: amfp). Sample rate of at least 20050Hz.  
> If  
>>> using  
>>>> MP3, a bit rate of at least 96kbps. The reference audio sample  
>>> needs  
>>>> to begin at an offset of 0 in the video and be at least 45  
>>> seconds  
>>>> long. I suggest creating a fingerprint of the entire video  
>>> soundtrack.  
>>>> The fingerprints are small and this will give you the most  
>>> flexibility  
>>>> later.  
>>>>  
>>>> 1b. A second utility will create a reference database image  
>> file  
>>>> (extension: amdb) by recursing a directory structure  
> containing  
>>  
>>>> fingerprint files. The utility will take a 20 second segment  
> of  
>>> each  
>>>> reference fingerprint from an offset of 7 seconds (as we work  
>>> with you  
>>>> we may want to adjust this in the future). A set of reference  
>>>> database image files can be deployed onto one of our  
> IDServers.  
>>> We  
>>>> recommend structuring your fingerprint archive so that  
> database  
>>> image  
>>>> files contain no more than 100,000 reference fingerprints.  
>>>>  
>>>> When you send in a fingerprint of an unknown soundtrack for  
>>>> identification, you would HTTP POST it to either our music  
>>> fingerprint  
>>>> IDServer, or the YouTube content IDServer (or perhaps to both  
>> at  
>>> the  
>>>> same time). We had discussed with YouTube that the server  
>>> holding your  
>>>> specific take-down fingerprints would be set to examine the  
>>> unknown  
>>>> more exhaustively. You can afford to do that because the  
> number  
>>> of  
>>>> reference fingerprints in your take-down database will be

> small  
>>> - on  
>>>> the order of 100-200,000 or so.  
>>>>  
>>>> 1c. One of the input parameters to the fingerprint creation  
>>> utility is  
>>>> an arbitrary string of up to 50 characters; this string is  
>>> embedded in  
>>>> the fingerprint file and will be the only identification  
>>> returned from  
>>>> the identification process. Your application would use this  
>>> string as  
>>>> an index into your metadata.  
>>>> Again, this was part of the requirement to keep us completely  
>>> blind to  
>>>> the actual metadata of your take-down fingerprints.  
>>>>  
>>>>  
>>>> 2. We do not currently offer an API to query our music  
>> metadata.  
>>>> We could make one for you. Our preference would be that you  
>> post  
>>> the  
>>>> query in an HTTP transaction and we would return an XML  
> package  
>>> of the  
>>>> result. However, not all of our metadata entries have an ISRC  
>>> value.  
>>>> If you were to get a hit on ISRC, then you know the song is in  
>>> the  
>>>> database, but a not-found is inconclusive.  
>>>> You should also know that in our experience ISRC is  
> unreliable.  
>>>> Some labels have used the same ISRC code for different master  
>>>> recordings.  
>>>>  
>>>> This query was not part of the initial contract so if you want  
>>> it I  
>>>> will have to talk to Vance. I'm sure this would entail NRE  
>>> charges to  
>>>> you and perhaps a monthly fee.  
>>>>  
>>>>  
>>>> 3. To remove a fingerprint you would remove the fingerprint  
>> from  
>>> the  
>>>> archive and use the utility described above to regenerate the  
>>> database  
>>>> image. You would FTP the new image to our IDServer. The  
>> IDServer  
>>>  
>>>> checks every 5 minutes for database updates, but it only does  
>>> one  
>>>> update an hour. Or, your application could simply ignore an  
>>>> identification if it was made with a fingerprint you wish to  
>>> remove.  
>>>>  
>>>>

>>>>  
>>>>  
>>>> What I have described above is the process we envisioned when  
>>> talking  
>>>> with your team. We are certainly willing to alter the process  
>> in  
>>> ways  
>>>> that will make it easier for you. There will probably be a  
> cost  
>>> for  
>>>> anything other than minor changes.  
>>>>  
>>>> I look forward to working with you on this project.  
>>>>  
>>>> Best Regards,  
>>>> Jim Schrempp  
>>>>  
>>>> Audible Magic Corporation  
>>>> 408.399.6405 x105  
>>>>  
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>>>> and may contain confidential information and trade secrets  
>>>> of Audible Magic. Unauthorized use or disclosure is  
>>>> prohibited.  
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>>>>  
>>>> -----Original Message-----  
>>>> From: Franck Chastagnol [mailto:fchastagnol@youtube.com]  
>>>> Sent: Monday, August 14, 2006 11:33 AM  
>>>> To: j\_schrempp@audiblemagic.com  
>>>> Cc: thom@musclefish.com; Frey Waid  
>>>> Subject: YouTube evaluation questions  
>>>>  
>>>> Hi Jim,  
>>>>  
>>>> I'm working with Frey Weid on the evaluation of the  
>> AudibleMagic  
>>>  
>>>> solution.  
>>>>  
>>>>  
>>>> As you may know, in addition to using the reference  
>> fingerprints  
>>> of  
>>>> copyrighted content provided by AudibleMagic, YT is also  
>>> interested in  
>>>> adding (and managing) its own reference fingerprints to the  
> DB.  
>>>> See below some technical questions for you to understand how  
> we  
>>> would  
>>>> be able to achieve this.  
>>>>  
>>>>  
>>>> Also, an unrelated question regarding the MFCBR API:  
>>>> For some of the mp3 samples I have been testing with, the API  
>>> method



>>>> MFXMLIDRequestAnalyzeAndDestroy returns undocumented error  
>>>> 78 and prints "Error: mp3 decoder failure." on stderr.  
>>>> Do you know what this error means and how to avoid it ?  
>>>> It that helps, I can send you a mp3 sample to reproduce.  
>>>>  
>>>>  
>>>> I would appreciate if you would have time to answer these  
>>> questions,  
>>>>  
>>>> Thank you,  
>>>> Franck  
>>>>  
>>>> -----  
>>>>  
>>>> 1. Is there an API to upload a new reference fingerprint to  
> the  
>>> DB ?  
>>>> a. please provide details (type of API: XML-RPC, REST,  
>>> other) and  
>>>> share any documentation available  
>>>> b. what is the preferred format/codecs, bitrate, length  
> for  
>>> a  
>>>> reference fingerprints ?  
>>>> c. along with standard meta-data (Album, Artist, Song,  
>>> Isrc,  
>>>> etc...), can YT upload its own meta-data which will then be  
>>> returned  
>>>> when calling the fingerprinting match API ?  
>>>>  
>>>> 2. Is there an API to query against the DB to determine if the  
>>>> fingerprint of a given Audio (based on ISRC) is present ?  
>>>> a. please provide details (type of API: XML-RPC, REST,  
>>> other) and  
>>>> share any documentation available  
>>>>  
>>>> 3. Is there an API to remove a fingerprint from the DB ?  
>>>> a. please provide details (type of API: XML-RPC, REST,  
>>> other) and  
>>>> share any documentation available  
>>>>  
>>>> -----  
>>>>  
>>>  
>>  
>

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//Apple Computer//DTD PLIST 1.0//EN" "http://www.apple.com/DTDs/PropertyList-
1.0.dtd">
<plist version="1.0">
<dict>
  <key>date-sent</key>
  <real>1155835780</real>
  <key>flags</key>
  <integer>33815681</integer>
  <key>original-mailbox</key>
  <string>local:///Outbox</string>
```

<key>sender</key>  
<string>Franck Chastagnol &lt;fchastagnol@youtube.com&gt;</string>  
<key>subject</key>  
<string>Re: YouTube evaluation questions</string>  
<key>to</key>  
<string>Jim Schrempp &lt;j\_schrempp@audiblemagic.com&gt;</string>  
</dict>  
</plist>

---