CHORDIFY: THREE YEARS AFTER THE LAUNCH

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Chordify

ABSTRACT

Chordify (`http://chordify.net`) is a music player that extracts chords from musical sources like Youtube, Deezer, Soundcloud, or your own files, and shows you which chord to play when. The aim of Chordify is to make state-of-the-art music technology accessible to a broader audience. This demo will focus on our redesigned user interface and the new editing feature, which allows people to correct mistakes in the automatically recognised chords.

1. CHORDIFY

Chordify officially launched in January 2013. Since then, it has grown to serve millions of views each month to visitors from all over the world. With over 250.000 users registered and 3 million songs already chordified, Chordify leads the way in automatic chord transcription for the masses.

Behind the scenes, Chordify uses the sonic annotator[1] for extraction of audio features. These features consist of the downbeat positions and the tonal content of a piece of music. Next, the Haskell program HarmTrace takes these features and computes the chords. HarmTrace uses a model of Western tonal harmony to aid in the chord selection. At beat positions where the audio matches a particular chord well, this chord is used in final transcription. However, in case there is uncertainty about the sounding chords at a specific position in the song, the HarmTrace harmony model will select the correct chords based on the rules of tonal harmony. We have several publications [1–4] describing some of the technology behind Chordify, and the code for HarmTrace is available online.[2]

2. DEMO DESCRIPTION

We've recently completely redesigned Chordify and now showcase featured songs, popular songs in your country, and artist pages. We've also made some changes to the chord editing feature, making it easier to copy-paste edits, and letting users change the measure of the song. The demo will focus on these features, and we'll collect feed-

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[1] `http://www.omras2.org/SonicAnnotator`
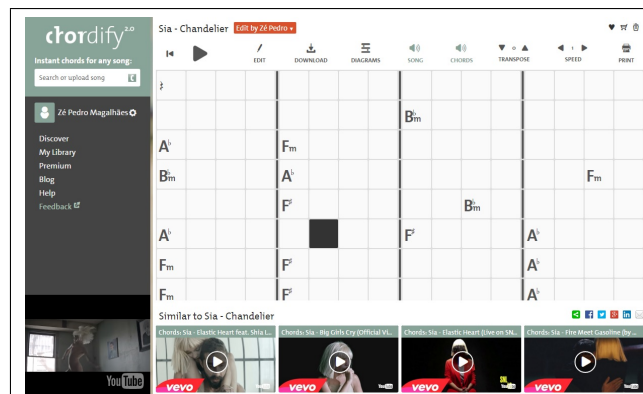[2] `http://hackage.haskell.org/package/HarmTrace`

Figure 1. A song being played in Chordify.

back from users regarding experience, usability, and appearance.

In the near future, we will use the edits to improve the algorithm itself, and to implement a system that merges edits from various users into one single corrected version.

3. REFERENCES

[1] W. Bas de Haas, José Pedro Magalhães, Remco C. Veltkamp, and Frans Wiering. HarmTrace: Improving harmonic similarity estimation using functional harmony analysis. In *Proceedings of the 12th International Society for Music Information Retrieval Conference*, ISMIR '11, pages 67–72, 2011.

[2] W. Bas de Haas, José Pedro Magalhães, and Frans Wiering. Improving audio chord transcription by exploiting harmonic and metric knowledge. In *Proceedings of the 13th International Society for Music Information Retrieval Conference*, ISMIR '12, pages 295–300, 2012.

[3] W. Bas de Haas, José Pedro Magalhães, Frans Wiering, and Remco C. Veltkamp. HarmTrace: Automatic functional harmonic analysis. *Computer Music Journal*, 37:4:37–53, 2013.

[4] José Pedro Magalhães and W. Bas de Haas. Functional modelling of musical harmony: an experience report. In *Proceedings of the 16th ACM SIGPLAN International Conference on Functional Programming*, ICFP '11, pages 156–162, 2011.