

## TwoTone- Advanced Features

So let's go through some of those advanced features, including the tempo of the sonification, to just kind of speed up or slow down the sonification. So here we have adjust duration. So if I increase the tempo, it's going to speed up the entire piece. And if I lower that, kind of slows it down a little bit. So let's listen to it, just at this kind of slower.

"Honey production in the USA, 1998 to 2012".

OK. And then according to total duration, row duration, if we speed up this tempo, that's going to increase the full tempo track. It will also, of course, shorten the length of the piece. We'll just trying to speak title off here. So you can start to hear that musicality come through and also because we kind of filtered this data set. You can hear that marimba number of colonies on that particular value.

So let's just rewind to that piece right there. So there is the marimba. TwoTone uses Google's Text-to-Speech API so that a creator can type a title for their piece and have it read in a male or female voice in different languages. And this audio is placed before the music starts to give context to the listener. You can turn it on or off. So technically, this is not purely sonification because sonification means and refers to the use of non-speech audio to convey information or perceptualize data.

So technically the Text-to-Speech is a form of turn using audio to again give kind of context to the work. Now let's use this example in Honey Production USA. OK, so here's our example honey production in the USA from 1998 to 2012. So let's use our Google Text-to-Speech API to give context to this, for sharing this dataset so that the audience can listen to what dataset is being sonified. So here just in the title section, I can start to type in. You can see I already entered this title before honey production in the USA, 1998 to 2012.

And we'll keep this in English on female, as the default settings. "Honey production in the USA 1998 to 2012."

So as you can see, it goes straight into the sonification of the piece that you've customized. You can pause that, you can also rewind back to the beginning if you'd like to even customize that further and add slightly more to that title. In this case, we may want to put number of colonies. And total production.

"Honey production in the USA 1998 to 2012, number of colonies and total production."

So now another thing you may want to do in conveying your sonification is also giving context to the instruments that you're using and creating something like a sonic legend. This is something we've been talking about building into the tool, but you can also customize this just by adding that in an audio editor. Datavized has built an audio editor called Airfield with the support of Online News Associations, Journalism 360 grant. So that's a different type of tool, open source as well that you could use to create a full sonification piece with customized audio to give context to the entire piece. Just as the way you would with customizing visual chart or graph and a tool like Tableau or Flourish.

So let's go ahead and export this particular sonification. So again, to do that, I will just go to the export feature here, and you can see I have the MP3 or Waveform PCM and it gives

you the estimated size. So let's keep this file size smaller in kilobytes and you can see right here, it gives you the estimate file size and also the bit rate. And then I can just export and it will export project file right to my device. Again, this does work on tablets and phones. You can see here, we can see the MP3 file.