Hello! After using Virtual Singer on Melody Assistant for a while, I decided to try out Harmony Assistant to see what was different. Before evaluating Harmony Assistant, I used Virtual Singer as a stand alone singer for songs and covers rather than a tool of reference for compositions. Problems I encountered when using Virtual Singer this way were...

1. Timing Issues: When mixing, I found that VS goes off time very easily. At rests it either comes in very early or late. It also goes slower than the BPM during a phrase. This problem is more prominent when using VS in fast songs and using it to sing English and French. I didn't encounter this issue when using Japanese as much. This leads me to believe that all languages except for Japanese have this issue maybe because of the final consonants. Even when lowering Time Shift to zero and raising the Fine Adjustment to maximum does not fix this issue.

2. Audio Level Issues: This is self explanatory. On certain phonemes especially the [e] Japanese and English phoneme, the audio peaks. On the [a] phoneme when VS sings high notes, the audio goes quiet. When manipulating VS, I have to adjust the volume a lot which makes it very inconvenient.

3. Phoneme Editing Issues: When editing phonemes using the SAMPA entry, sometimes the engine ignores the changes I made. I have to either put in a word that makes the sound I want or keep it that way.

How can Myriad improve Virtual Singer in an update? The answers are very easy.

1. Implement the Sing With No Delay script permanently into Virtual Singer: There is absolutely no reason why this should be an optional script locked into Harmony Assistant. Human vocalists don't cut out rests all together. I have experienced a very slight delay when using this script but it is nowhere near as bad as when I use plain Melody Assistant.

2. Level out the audio: self explanatory

3. Implement a phoneme editor: This should absolutely not be locked as a script. Say if you are in the lyric editor, there was an option to switch to a phoneme view. This way the appearance of the lyrics stay as is while you implement your SAMPA for that word in another mode that's invisible other than in phoneme view.

I believe Virtual Singer has a lot of potential! These fixes can make it much easier to use for vocal synthesizer users. But how will this benefit non-vocal synthesizer users? Generally no one likes being blasted with loud audio in the middle of what you're listening to. If the timing issues were to be fixed this can give a much more accurate sound to what your notation reads. You wouldn't want a demo singer to go stir crazy with rhythm, right? As for a phoneme view in the lyric editor, this is mainly for vocal synthesizers but could also benefit non-vocal synth users too. You could make your singer sound more human by making Virtual Singer open up on their vowels on high notes like human singers! So maybe instead of making VS sing an [I] US ENG phoneme, they could sing either [e] or [eI]. The ability to use phonemes outside of the language you are using would also be great! This could make VS also sound more human! Like

diphthongs in Japanese, for example. I would love to see Virtual Singer improve! I believe this update can benefit everyone and improve VS's most prominent issues.