

Learn to play by playing Songs2See

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Songs2See software makes learning easier and more entertaining. (© Fraunhofer)

Recorder, guitar, piano or violin - many children and young people learn to play these popular instruments. It requires a lot of practice to read note after note from the sheet music and then strike the right key or pluck the correct string. Songs2See software makes learning easier and more entertaining. The developers will be presenting the prototypes at the IFA international electronics convention in Berlin, Germany, from Sept. 3 to Sept 8, 2010.

In the digital age, children often no longer learn about the world of melodies and rhythms via an instrument, but via the computer - using games like Singstar, [Guitar Hero](#) or Rock Band running on [Wii](#) or XBox. Instead of a real instrument, the players hold a [game controller](#) in their hands, which sometimes even looks a bit like a guitar but has buttons

instead of strings that the player must hit.

"It is our goal to offer people who want to learn an instrument even more fun and variety, using elements that they perhaps already know from computer games. This motivates them, and it trains not only musical knowledge, but motor skills as well," says Christian Dittmar of the Fraunhofer Institute for Digital Media Technology IDMT in Ilmenau, Germany.

The attraction of Songs2See is that it takes only a few mouse clicks to turn one's favorite songs into practice pieces that can be compiled as an individual practice folder. Christian Dittmar explains how it works, "First, the user selects a song from his CD or MP3 collection and imports it into the software. Legally that is not a problem, since he purchased the song and is only using it for private purposes. In this case he does not simply listen to the [music](#), but he also uses it to make music." The player can select which instrument s/he wants to play by clicking on it. Currently, the choices are the recorder, the glockenspiel and the melodica. The piano, guitar, trumpet, saxophone or drums will also be supported in the future. With the next click, the software presents the song in three different ways. The first one is that it is displayed as a music sheet. The second one shows the player where the fingers have to be placed on the instrument and in which sequence. Finally, there is the intuitive rendition - similar to music computer games, which show the duration and height of the respective tones with the aid of bars.

Now everything is ready to the point that the learner can take his instrument and practice the song. A microphone (most computers have an integrated microphone) records what was played. The software shows the player the position in the music sheet where he currently is. Songs2See also evaluates if the notes are struck properly and if the rhythm is being maintained. This way the practicing does not become

too difficult, and pitch and tempo can be changed as desired and with it the individually adjusted degree of difficulty, key or style of music. As Dittmar explains, "What we are doing is called automatic music transcription. In order to run the note recognition in the background, we had to teach the software to accurately recognize the tones of the varied instruments and not be confused by accompanying music."

The software is of particular interest to retailers of music learning software, but also for music publishing houses, who can prepare their sheet music material with it interactively. The [software](#) can of course be useful for teaching music at schools. Partners in Norway are already testing it.

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