Usage and recent developments of KetCindy

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Abstract

In the previous conference (CADGME 2016, Romania), we organized a workshop on KetCindy. As a sequel of it, this workshop will be organized as a brief introduction to both basic usage and recent developments of KetCindy. Though TeX enables us to edit high-quality mathematics teaching materials containing finely-tuned mathematical expressions, it is not easy for usual mathematics teachers to handle scientific artworks on its final PDF outputs. KetCindy is a plug-in of the popular dynamic geometry software Cinderella to generate TeX graphical code of its graphical output using which we can insert finely-tuned scientific drawings into TeX final outputs in a highly flexible manner. The remarkable feature of Cinderella and KetCindy is that they can serve as platforms on which several kinds of mathematical tools can be combined. For instance, in Romania conference, we demonstrated some typical case of this collaborative use collaboration between Cinderella, Maxima, R, and TeX. Since then, further technical developments as follows have been accomplished.

1. Easier installation system including a built-in into popular TeXLive system

2. Easy generation of PDF slides containing high-quality flip animations and recorded messages

3. Calling programs of C as a quick computing tool to generate high-quality 3D graphics in TeX final outputs

4. Synchronized use with the Cinderellas function of exporting HTML output which can be used on popular touch devices

Since the required systems (TeX, Cinderella, R, Maxima, C, and so on) are all free, any people can freely use KetCindy system in anytime and anywhere. Since the scripting language of Cinderella (CyndyScript) is well organized and the conversion of Cinderellas graphical output into TeX/PDF is automatized, not only daily users of TeX but also mathematics teachers who do not use TeX as an editing tool are welcomed. Any of the

popular operating systems (MacOS, Windows, and Unix) are compatible with KetCindy, participants are asked to bring their own PC and install whole system in this workshop.