



Background

General didactic background

A simple idea based on understanding of continuous and discrete functions can explain the essence of digital technology, which can 'squeeze ever more information on ever smaller bits of space'. In particular, it is easy to explain the idea of how dozens of telephone conversations can be squeezed into a single phone line. Using this idea we can at the same time explain how technology works but also approach to understanding of a (continuous or discrete) function in a very intuitive way.

Mathematical background

It is an advantage if students are familiar with *sin* and other nontrivial functions. But it is not a prerequisite as an intuitive notion of a function can be obtained by means of sounds or/and simple paths indicating for example moods, feelings (we feel sounds),

The idea of teaching implementation

The mathematics concept behind this idea is quite simple. It fits the chapters of functions but it can be used as an independent lecture – presentation to promote usability and the beauty of mathematics. The presentation can be adapted to different levels, from primary school pupils to university students, by emphasizing different parts. But in order for the idea to be truly put to good use in teaching, the interesting content is definitely not sufficient. It requires deep and profound understanding of the teacher and a superb didactical performance in order to make it a teaching success.