Revival of the Encyclopedia of Mathematics

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The Encyclopedia of Mathematics Wiki[1] (EoM) is, as most readers of this text probably already know, an open access resource designed specifically for the mathematics community. With more than 8000 entries, illuminating nearly 50,000 notions in mathematics, the Encyclopedia of Mathematics was the most up-to-date graduate-level reference work in the field of mathematics.[2,3]

From its start in 2011, the EoM had to cope with the problem that the mathematics formula code was only available through png images, based on a former CD edition from 2002, because the TeX code was lost by the former publishers of the EoM.

This problem concerned about 270,000 formulas, which, due to the missing TeX code, needed to be completely retyped whenever they were edited. Therefore, over the course of two decades, the EoM has become more and more out of date, as the loss of the TeX codes has made it difficult to update the 8000 articles of the EoM.

This problem was recently solved: There were three categories of formulas with missing TeX code:

1) During the last years, about 60% of all formulas had already been manually translated into TeX by world-wide volunteers cooperating with EoM.

2) For the majority of formulas, old markup typesets in an nroff-like style became available, however with no interpreter. Recently, an interpreter for these markup pages has been devised allowing to automatically translate, mostly error-free, the image-based code into TeX.

3) Finally, there were the remaining around 60,000 formulas, for which there were no markup and no manual translations.

Ulf Rehmann, professor at Bielefeld University and editor in chief of EoM, has organized the automatic translation for most pages as described in 2). Maximilian Janisch, student at the University of Zürich, has translat-ed the formulas of type 3) into TeX semi-automatically (i.e. the formulas were translated with machine learning, but the translations were checked twice manually). Now, an almost completely TeXified-version of the EoM is available online.[1]

The Revival of the EoM: Long story short, the renewal of the EoM articles is now possible without tedious manual retyping of the formulas. It would be great if many mathematicians started using this chance in order to bring the EoM back up to date.

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[1] https://encyclopediaofmath.org/wiki/Main_Page

[2] The EoM is based on a book version "Encyclopaedia of Mathematics", edited by Michiel Hazewinkel. Its last print edition, consisting of 13 volumes, was published in 2002.

[3] A statistical EoM example by Boris Tsirelson (https://encyclopediaofmath.org/wiki/User:Boris_Tsirelson#Some_statistics): Measurable space (50,000+ views); Standard Borel space (12,000+ views); Analytic Borel space (5,000+ views); Universally measurable (5,000+ views); Measure space (20,000+ views); Standard probability space (6,000+ views); Measure algebra (measure theory) (7,000+ views).