

From the A&S handbook to a digital mathematics platform: reusing the DLMF for the DRMF

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The Digital Library of Mathematical Functions (DLMF) is the digital successor of one of the most cited books, “The Handbook of Mathematical Functions with Formulas, Graphs, and Mathematical Tables,” edited by Milton Abramowitz and Irene A. Stegun. In contrast to the book, the DLMF provides machine-readable semantics that allows for formulae search and interactive display of additional metadata. This includes links to definitions for the symbols and identifiers used in the formula, references to proofs and sketches of proofs when proofs are not available on the literature, as well as hyperlinks to related concepts. The NIST Digital Repository of Mathematical Formulae previously used a MediaWiki based framework to reimplement these features but focusses on individual mathematical formulae rather than continuous chapters regarding mathematical topics.

In this talk, we show the current status of a new experiment: the utilization of the full software used by the DLMF to display DRMF formulae.