Funding report: TEX Gyre Math Project

In 2008, UK-TUG agreed fund the TeX Gyre Project in creating OpenType maths fonts (`http://uktug.wordpress.com/projects/`). This project involves two distinct strands, adding maths support to Latin Modern and adding maths support to the TEX Gyre fonts.

Starting up the project took some more time also because some necessary changes / updates took place in the related text fonts. As the maths font project is a continuation of projects already running for many years, this is not really a problem but makes the schedule somewhat fuzzy. There is also a relationship with the engines and more time than expected went into figuring out specifications (and even now, for instance in the TUG Lucida project, quite some times goes into reverse engineering the OTF maths specification). Some detail on handling Unicode math in TEX is available on the GUST website: `http://www.gust.org.pl/projects/e-foundry/math/index_html`.

The first stage of the project has been focussed on Latin Modern maths support (`http://www.gust.org.pl/projects/e-foundry/latin-modern`). Latin Modern serves as a template, both for coverage and methodology. The work requires working with other groups involved in OpenType maths support, for example the Microsoft maths team.

This first of the project is now approaching completion. An overview of the glyph coverage in Latin Modern Math is available as part of the unicode-math package documentation (`http://mirror.ctan.org/macros/latex/contrib/unicode-math/unimath-symbols.pdf`). As a demonstration, this doucment was complied using LuaLATEX in TEX Live 2011 and using the Latin Modern Math font.

$$J_n(z) = \frac{(\frac{1}{2}z)^n}{\Gamma(n+\frac{1}{2})\Gamma(\frac{1}{2})} \int_0^\pi \cos(z\cos\theta)\sin^{2n}\theta\, d\theta$$

The next phase of the project is to add maths support to the TEX Gyre fonts. This will require the creation of new glyphs, as unlike Latin Modern there is no simple model for the full range of maths symbols in these fonts. This phase of the project is ongoing.