

WGL Meets TGTP

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Abstract

The Web Geometry Laboratory (*WGL*) is a collaborative and adaptive e-learning Web platform integrating a well known dynamic geometry system. Thousands of Geometric problems for Geometric Theorem Provers (*TGTP*) is a Web-based repository of geometric problems to support the testing and evaluation of geometric automated theorem proving systems.

The two systems should collaborate. The *TGTP* corpus should be made available to the *WGL* user, allowing, in this way, the exploration of *TGTP* problems and their proofs. On the other direction *TGTP* could gain by the possibility of a wider users base submitting problems.

Such information exchange raises many issues: geometric search—the *WGL* user, working in a geometric problem, should be able to ask for geometric conjectures related to that construction; levels of geometric knowledge—the problems in *TGTP* must be classified in such a way that, in response to a *WGL* query, only the problems in the user's level are returned; different aims of each tool—*WGL* is about high-school geometry, *TGTP* is about formal proofs in semi-analytic and algebraic proof methods, not a perfect match indeed; technical issues—many technical issues need to be addressed to make this “marriage” work. Instead of a giant (useless!?) tool, trying to cover all, the interconnection of specialised tools seems much more promising. The challenges to make that connection work are many and difficult, but, it is the authors impression, not insurmountable.