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### **Technology as a support for generating and presenting proofs in geometry**

Dynamic geometry and similar software is a constitutive part of today's school geometry. However, when proving and learning about proofs in geometry is considered the role of technology is currently marginal, and the future role, due to the promising developments in automated theorem proving, is yet to be set. Regarding proofs and proving in school geometry the didactic focus is currently not on automated proving, but on issues like: whether and how students understand the concept of proof, how to present proofs to students, how students understand proofs of theorems, how to assess their understanding of proofs, and how to enable students to produce their own proofs – and how to profitably and effectively involve technology in treating these issues. Several questions are still open, e.g.: Should technology direct students to paragraph form, flowchart or two-column presentation of proofs (or to all three of them)? Should software tools emphasize symbolic, verbal or static/dynamic visualisation or all such presentations?

We shall present some tentative solutions to the above questions as are implemented in OK Geometry software and are not found in common dynamic geometry software. Most of the solutions are simple aids to be used in generating proofs of geometric statements (e.g. automated observation of properties), some of them are tools for writing up proofs, and some of them are designed for presenting proofs. Such software tools have little impact if they are not incorporated in some method for learning proving. For this purpose we shall present two approaches. The first one is a simple method of producing a flowchart proof by ordering pictorial representations of properties. The second method is a three step method of generation/presentation of proofs. The method is derived from the assessment model of Young and Lin and, we believe, is suitable for novices and less able students. We also plan to present a pilot study on the effectiveness of the second method.