On Some Abstract Termination Criteria

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Abstract. We investigate some abstract criteria for proving termination of (abstract and term) rewriting systems. In particular, we consider the problem under which conditions termination follows from weak termination, both locally and globally. We provide some refined versions of a corresponding known result from [Klo80]. Furthermore we review some other simple, but quite useful techniques for proving termination of a rewrite relation by reducing the problem to termination of some subrelation. Applying these abstract criteria to term rewriting systems reveals the essence of some known termination results and partially enables generalized versions.

References

[Klo80] Jan Willem Klop. *Combinatory Reduction Systems.* Mathematical Centre Tracts 127, Centre for Mathematics and Computer Science, Amsterdam, 1980.