Non-standard behaviour of weighted tree-automata

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In this talk I will work with tree-automata where the domain, from which the weights are taken, is not necessarily a semi-ring. I will apply the theory of weighted tree-languages, in order to demonstrate, how this non-standard behaviour can still be studied with the standard-methods of automata-theory. In particular I will show how to obtain generalizations of Kleene's theorem for these behaviours.