Actions of maximal growth

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We study acts and modules of maximal growth over finitely generated free monoids and free associative algebras as well as free groups and free group algebras. The maximality of the growth implies some other specific properties of these acts and modules that makes them close to the free ones; at the same time, we show that being a strong "infiniteness" condition, the maximality of the growth can still be combined with various finiteness conditions, which would normally make finitely generated acts finite and finitely generated modules finite-dimensional.

This is a joint work with YU. A. BAHTURIN (Memorial University of Newfoundland, St John's & Moscow State University).