$((0(0+1))^\star + 1(0+1)(1^\star(0(0+1))^\star)^\star)^\star$

First 20 words: $\lambda, 00, 01, 111,$
$0000, 0001, 0100, 0101, 1011, 1111, 100000, 101011,$
$1000100, 1000101, 1001100, 1001101, 1101100, 1101101,$
$11101100, 11101101, \ldots$