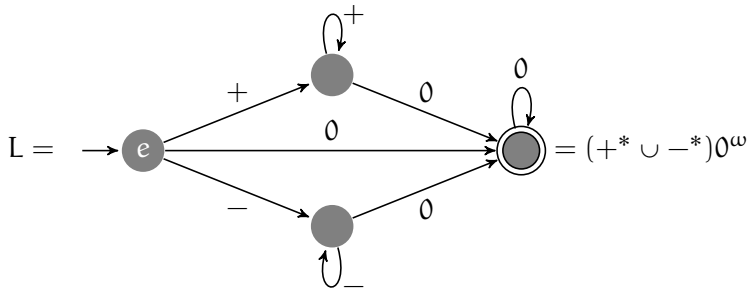


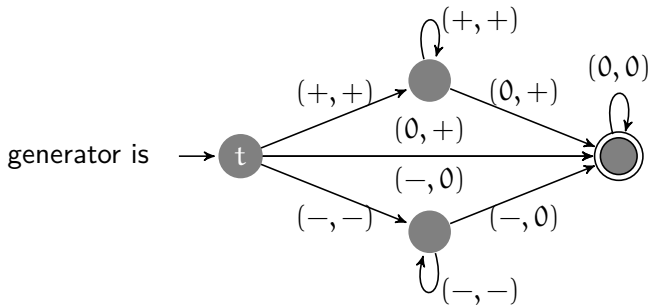
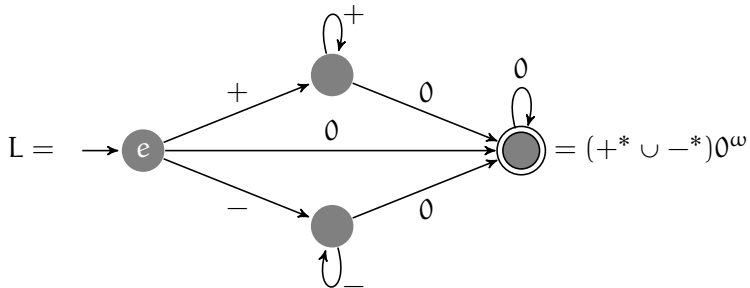
Automatic actions

Laurent Bartholdi

February 5th, 2024

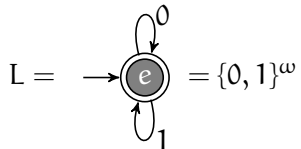


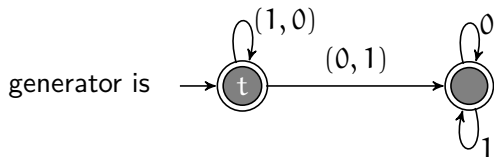
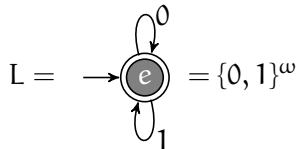
Automatic groups | $\mathbb{Z} = \langle t \rangle$

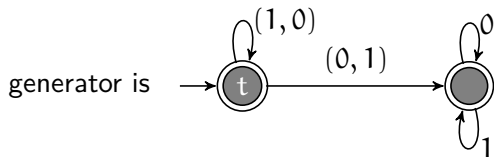
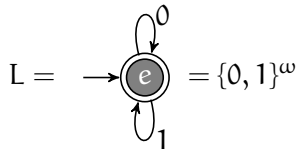


$$L = (x^* \cup X^*)(y^* \cup Y^*)e^\omega$$

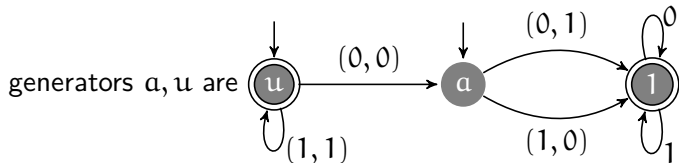
generator x is $(X, e) \cdots \cup (x, x)^*(y, x)(y, y)^*(e, y)(e, e)^\omega \cup \cdots$

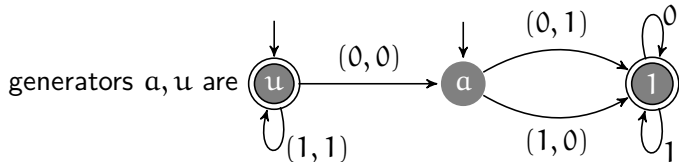




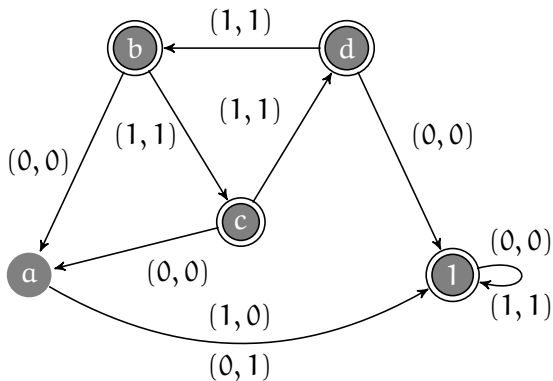


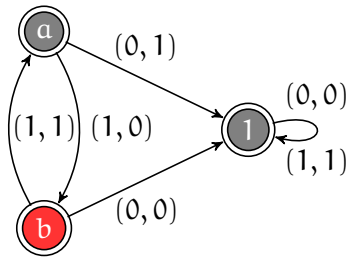
Gray code, $D_\infty = \langle a, u \rangle$

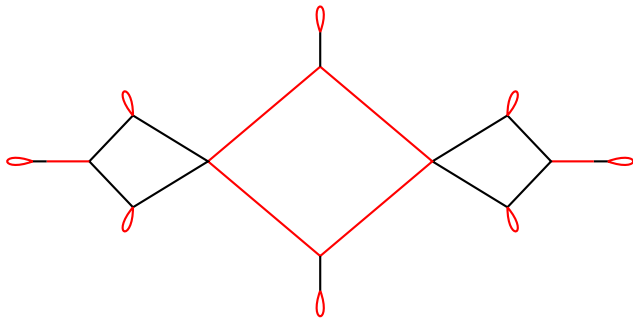
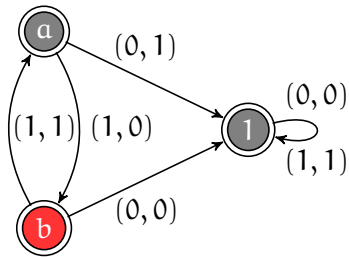


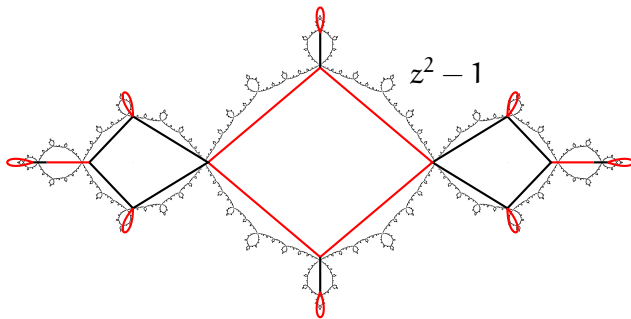
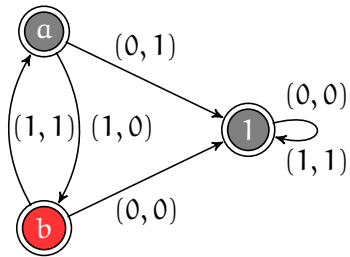


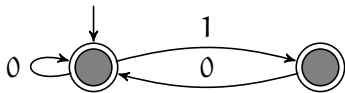
The Grigorchuk group $G = \langle a, b, c, d \rangle$



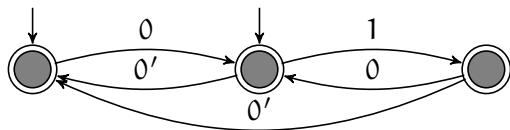


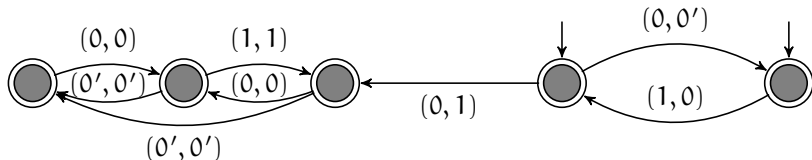
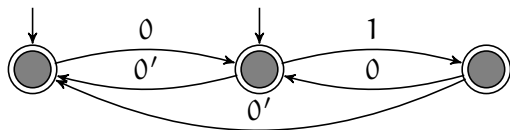


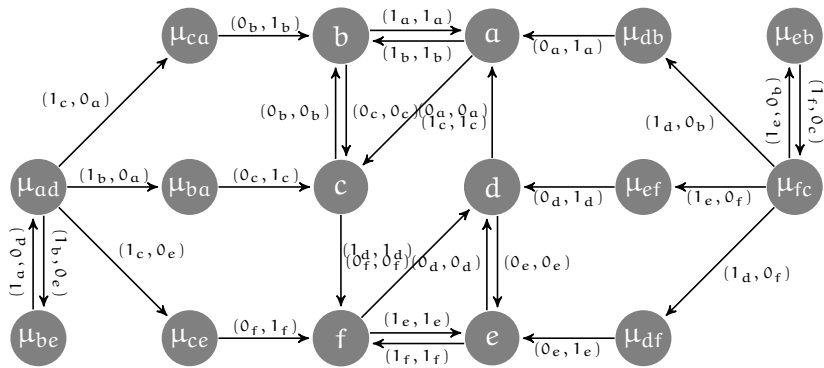




Substitutional subshifts | The Fibonacci subshift







Substitutional subshifts | A simple group of intermed. growth

