Theorem 1. *If $\mathcal{G} = (G, \mathcal{L})$ is the minimizing right resolving presentation of an irreducible sofic shift X and X is and N-step shift of finite type, then $\mathsf{X}_G \cong \mathsf{X}_{\mathcal{G}}$.*

Proof. Let x, y be walks in X_G. If $\mathcal{L}_\infty(x) = \mathcal{L}_\infty(y)$, then for any i, the paths $x_{[i-n,i-1]}$ and $y_{[i-n,i-1]}$ present the same word. Because that word is of length N, the word is synchronizing for $\mathcal{G}$ (from 3.4.17), so those paths end at the same vertex. Since $\mathcal{L}(x_{[i]}) = \mathcal{L}(y_{[i]})$, $\mathcal{G}$ is right resolving, and $x_{[i-n,i-1]}$ and $y_{[i-n,i-1]}$ end at the same vertex, then $x_{[i]} = y_{[i]}$ and hence $x = y$, so $\mathcal{L}_\infty$ is injective. By definition, $\mathcal{L}_\infty$ is surjective. Therefore, $\mathcal{L}_\infty$ is bijective and a conjugacy from X_G to $\mathsf{X}_{\mathcal{G}}$. $\square$