$$U_{t} \longrightarrow \underbrace{\mathcal{M}(\cdot, \theta_{\mathcal{M}})}_{\mathbf{\mathcal{M}}} \underbrace{\mathbf{y}_{t}^{\text{sim}}}_{\substack{\text{quantizer} \\ \text{log-likelihood} \\ \text{Eq.(28)}}} \longrightarrow \mathcal{L}_{t}(\theta)$$