

$$\sigma = \text{Sig}_{sk} \left\{ g^r \parallel H \left(g^{r\alpha_{\text{Bob}}} \right) \parallel E_{pk_{ID_{\text{Bob}}}} \left(vk \parallel g^{r\alpha_{\text{Bob}}} \parallel K \right) \parallel H \left(g^{r\alpha_{\text{Dylan}}} \right) \parallel E_{pk_{ID_{\text{Dylan}}}} \left(vk \parallel g^{r\alpha_{\text{Dylan}}} \parallel K \right) \parallel E_K \left(M \parallel ID_{\text{Bob}} \parallel ID_{\text{Dylan}} \right) \right\}$$