





$$\begin{split} &\mathrm{ID}_{U_{A}} - \langle \mathrm{ID}_{U_{A}}, \mathrm{enc}\left(\mathrm{ID}_{RP_{A}}, N_{1}\right)_{\mathrm{key1}} \rangle - - - \mathrm{Account}_{A}(\mathrm{in}\ RP_{A}) \\ &\mathrm{ID}_{RP_{A}} - \mathrm{enc}\left(\mathrm{ID}_{RP_{A}}, N_{1}\right)_{\mathrm{key2}} - - - - - \langle \mathrm{ID}_{U_{A}}, \mathrm{enc}\left(\mathrm{ID}_{RP_{A}}, N_{2}\right)_{\mathrm{key2}} \rangle - - - - - \mathrm{Account}_{A}(\mathrm{in}\ RP_{A}) \end{split}$$



