In chapter 2, we proved

$$\boxed{\begin{array}{l}\mathcal{L}_{\mathsf{OTPReal}} \\ \hline \text{EAVESDROP}(m \in \{\mathtt{0},\mathtt{1}\}): \\ \quad k \leftarrow \{\mathtt{0},\mathtt{1}\} \\ \quad c := k \oplus m \\ \quad \text{return } c\end{array}} \equiv \boxed{\begin{array}{l}\mathcal{L}_{\mathsf{OTPRand}} \\ \hline \text{EAVESDROP}(m \in \{\mathtt{0},\mathtt{1}\}): \\ \quad c \leftarrow \{\mathtt{0},\mathtt{1}\} \\ \quad \text{return } c\end{array}}$$

With this fact, and from the definition of interchangability, we know that for all calling programs $\mathcal{A}$

$$\mathcal{A} \diamond \boxed{\begin{array}{l}\mathcal{L}_{\mathsf{OTPReal}} \\ \hline \text{EAVESDROP}(m \in \{\mathtt{0},\mathtt{1}\}): \\ \quad k \leftarrow \{\mathtt{0},\mathtt{1}\} \\ \quad c := k \oplus m \\ \quad \text{return } c\end{array}}$$

reduces to the same program as

$$\mathcal{A} \diamond \boxed{\begin{array}{l}\mathcal{L}_{\mathsf{OTPRand}} \\ \hline \text{EAVESDROP}(m \in \{\mathtt{0},\mathtt{1}\}): \\ \quad c \leftarrow \{\mathtt{0},\mathtt{1}\} \\ \quad \text{return } c\end{array}}$$