the attributes sensitive, extract and whereas n<sub>2</sub> has the attribute extract set. The intruder also knows  $\{k_3\}_{k_2}$ . Trace:

**Initial state:** The intruder knows the handles  $h(n_1, k_1)$ ,  $h(n_2, k_2)$ ;  $n_1$  has

 $h(n_2, k_2) \rightarrow unwrap(n_2, )$ Set\_unwrap:

 $h(n_2, k_2), \{k_3\}_{k_2} \xrightarrow{\text{new } n_3} h(n_3, k_3)$ Unwrap:  $h(n_2, k_2), \{k_3\}_{k_2} \xrightarrow{\text{new } n_4} h(n_4, k_3)$ Unwrap:  $h(n_3, k_3) \rightarrow wrap(n_3, )$ Set\_wrap:

 $h(n_3, k_3), h(n_1, k_1) \rightarrow \{k_1\}_{k_3}$ Wrap:  $h(n_4, k_3) \rightarrow decrypt(n_4, )$ Set\_decrypt:

Decrypt:  $h(n_4, k_3), \{k_1\}_{k_2} \rightarrow k_1$ 

Fig. 6. Re-import attack 2