```
 theory Wearable
begin
builtins:  asymmetric-encryption, signing
/*
Protocol:   An IoT-based micropayment protocol for wearable devices with formal
verification
Modeler:   Sriramulu Bojjagani, Koppala Guravaiah, and V.N. Sastry
Date:         July 2020
Status:       Working
*/
rule WD_1:
[ Fr(~kw)
, !Pkw($C, pkw)
-->
[ WD_1( $C, ~kw)
, Out( aenc(~k, pkC) )
]
rule Cust_1:
[ WD_1(C, kw)
, In( h(kw) )
]
--[ SessKeyC( C, kw) ]->
[]
rule Cust_1:
[ Fr(~Kcib)
, !Pk($IB, pkIB)
]
-->
[ Cust_1( $IB, ~Kcib )
, Out( aenc(~Kcib, pkIB) )
]
rule Mer_1:
[ Fr(~Kmab)
, !Pk($AB, pkAB)
]
-->
[ Mer_1( $AB, ~Kmab)
, Out( aenc(~Kmab, pkAB) )
]
rule Cust_2:
[ Cust_1(IB, Kcib)
, In( h(Kcib) )
]
```