SQUIRREL

An Interactive Prover for Protocol Verification in the Computational Model

D. Baelde, S. Delaune, C. Jacomme, A. Koutsos & S. Moreau

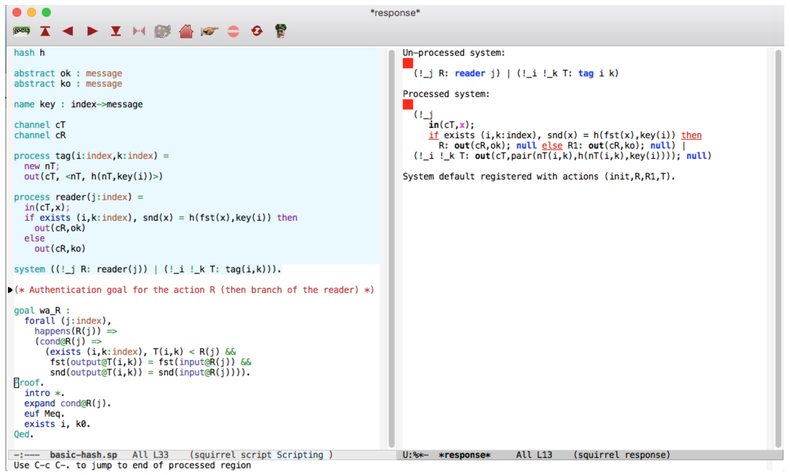
We illustrate our approach on the Basic Hash protocol which is an RFID protocol involving multiple tags and readers. Each tag stores a secret key that is never updated, and the readers have access to a shared database containing all these keys. The protocol is as follows:

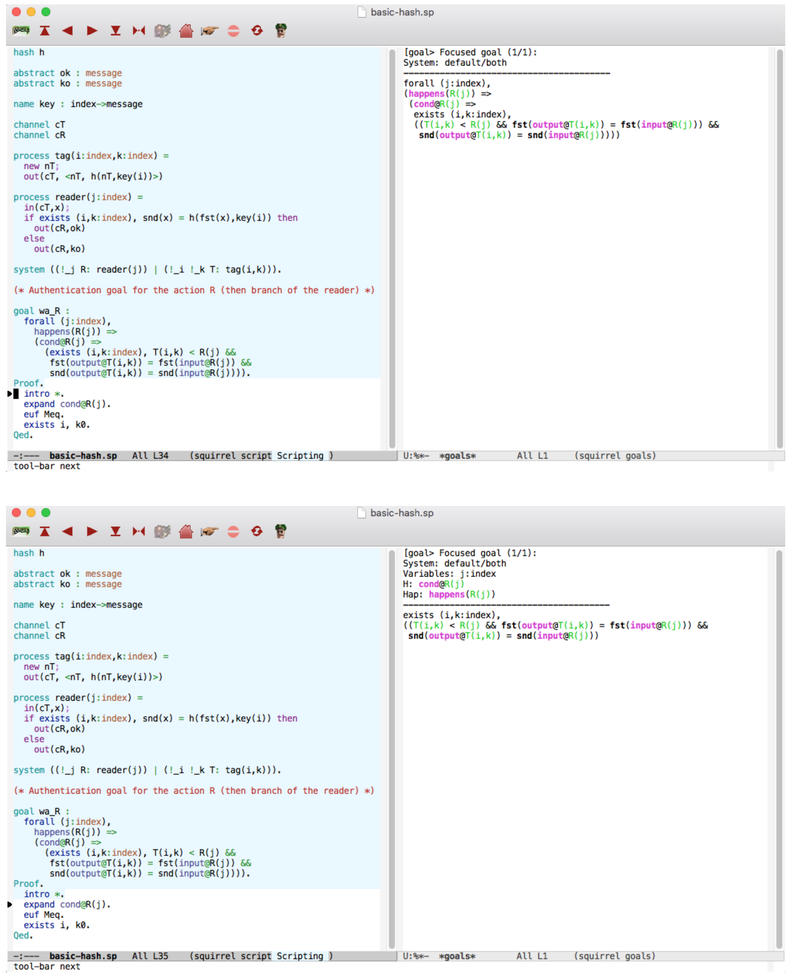
$$T \to R : \langle n, \mathsf{H}(n, key) \rangle$$

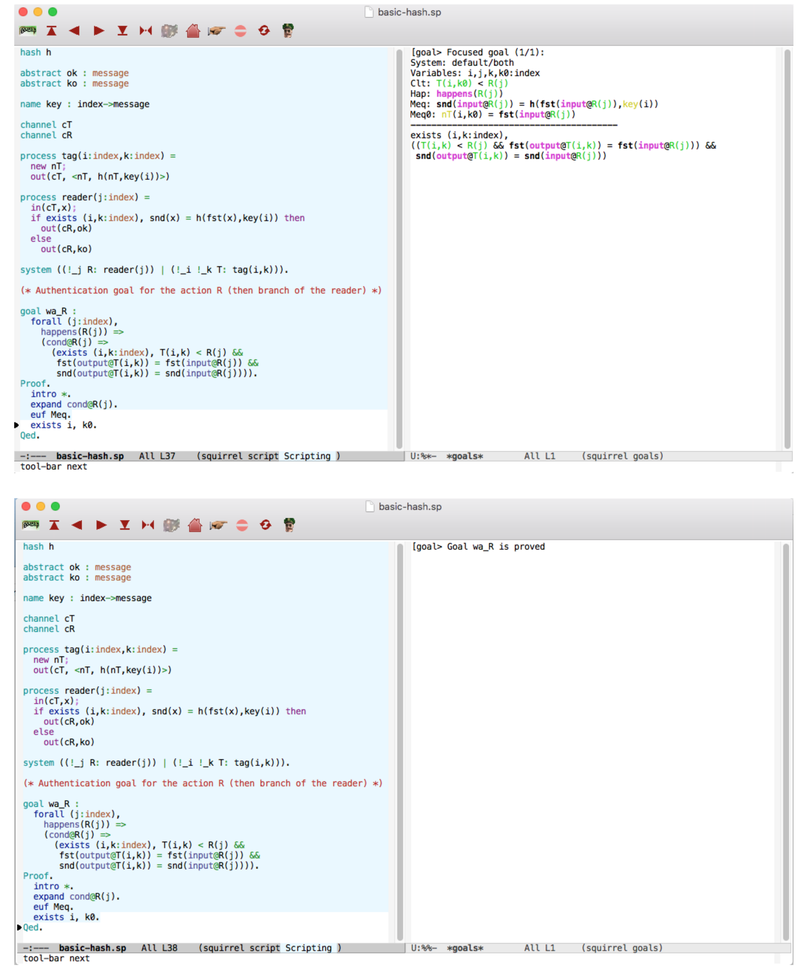
Here, n is a fresh name and key is the secret key. When receiving a message, the reader checks that it is a pair whose second component is a hash of the first component using one of the keys from the database. We illustrate how SQUIRREL works on a simple authentication goal. The screenshots below show how the proof can be done step by step.

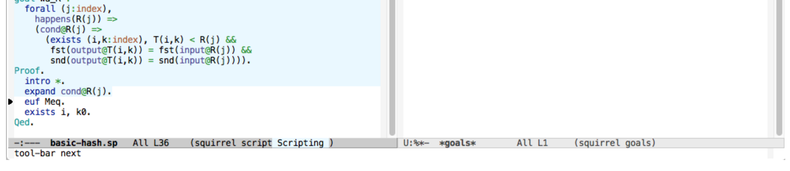
Poster Demo

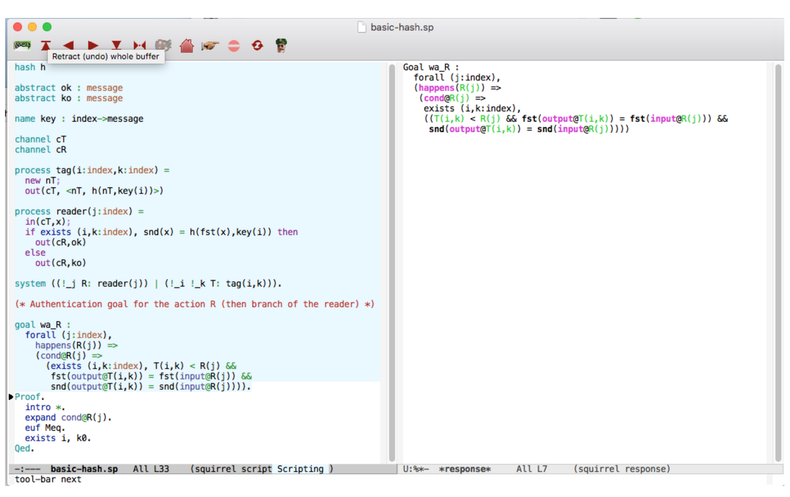
Hopefully, more online with the screen sharing feature!











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