Introduction to OTR

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What is OTR?

End-to-End Encryption for Instant Messaging.

- Encryption.
- Authentication.
- Deniability.
- Perfect Forward Secrecy.

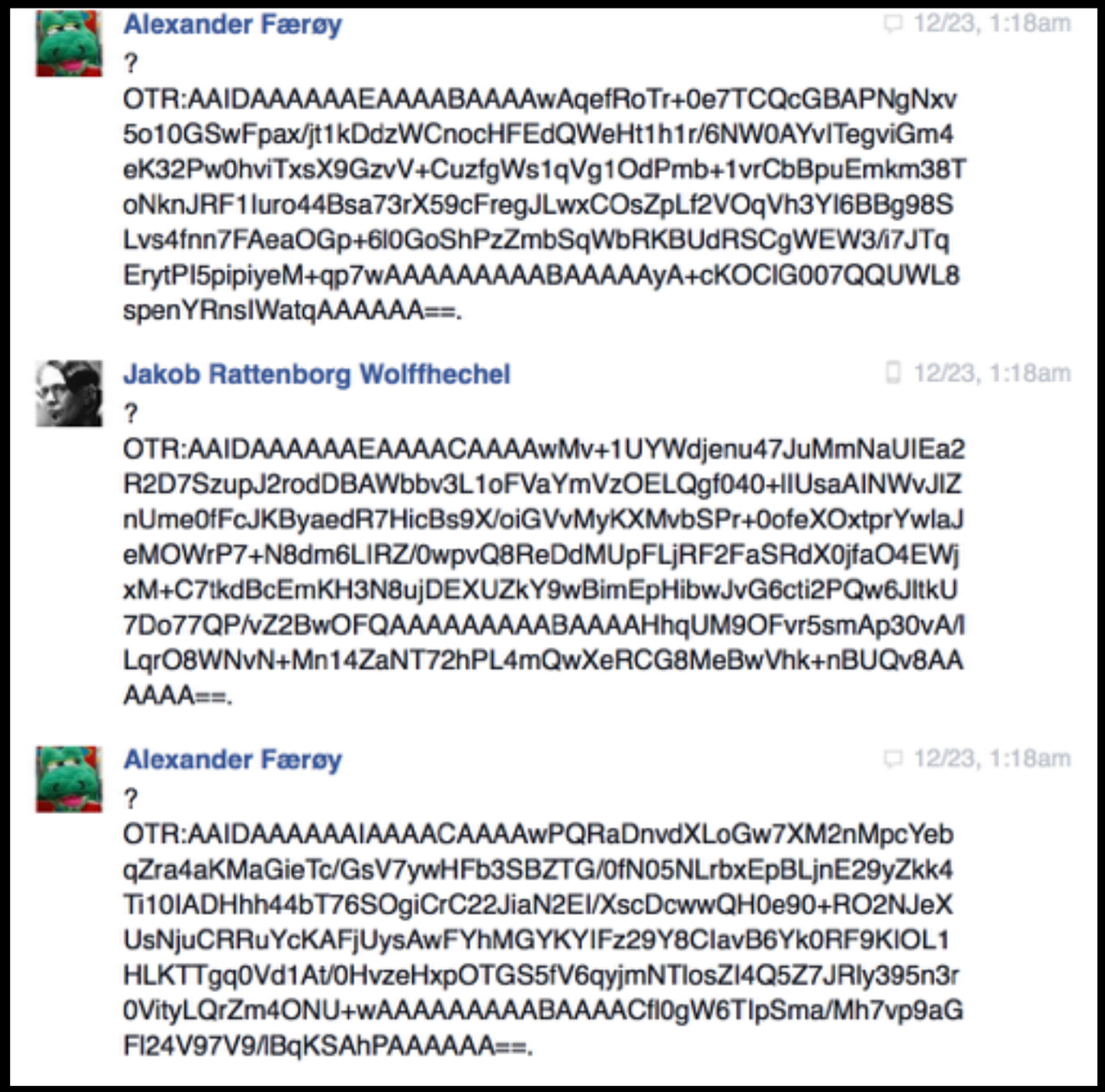
Encryption

- Reference implementation is open source.
- Peer reviewed design.
- Protocol agnostic.

Protocol Agnostic

- Jabber (XMPP).
- Internet Relay Chat.
- Facebook.
- Everything! **:-)**

Protocol Agnostic



Alexander Færøy 12/23, 1:18am

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Jakob Rattenborg Wolffhechel 12/23, 1:18am

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AAAA==.

Alexander Færøy 12/23, 1:18am

?
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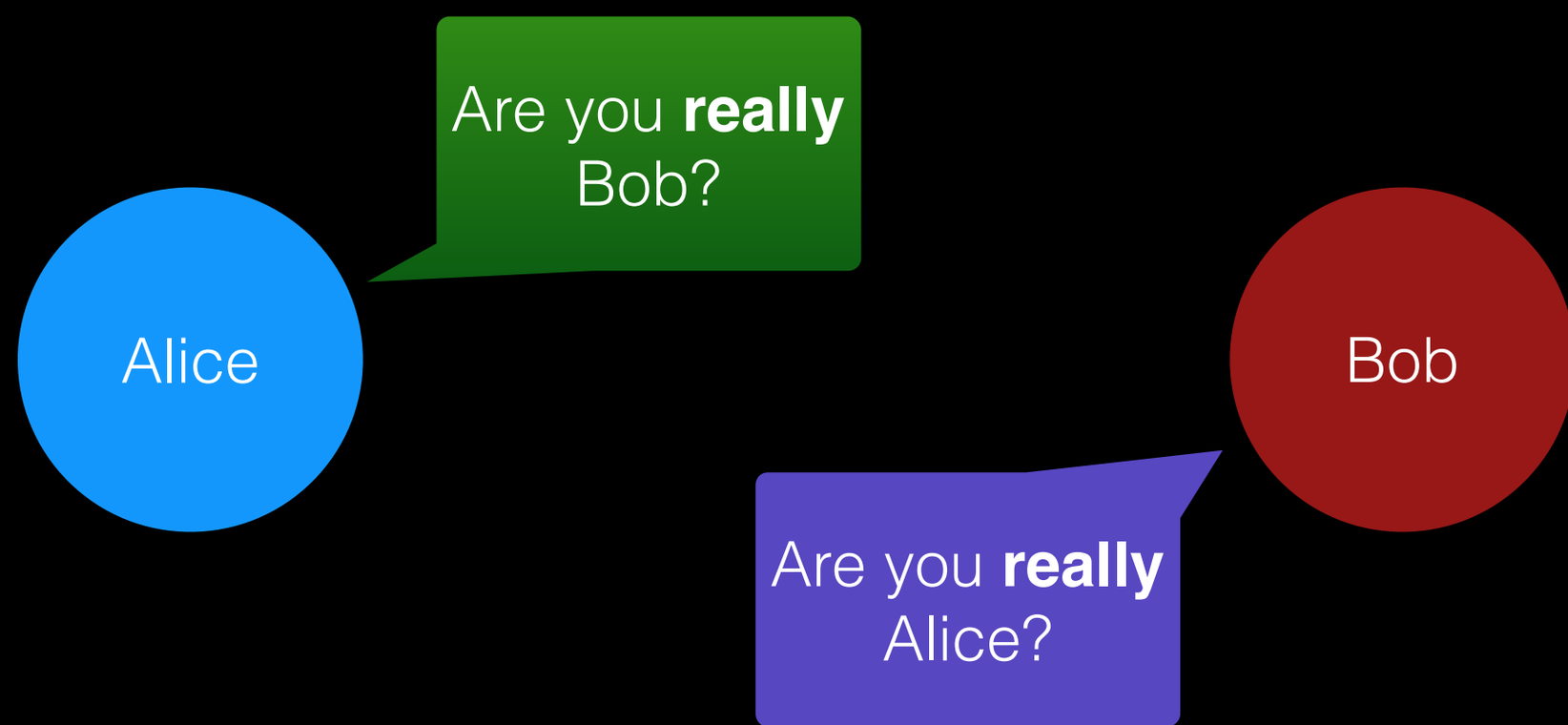
Authentication

- Fingerprint verification, like with PGP.
- Socialist Millionaires Protocol.

Socialist Millionaires Protocol

Ask a question that **only** the person you are communicating with is able to answer.

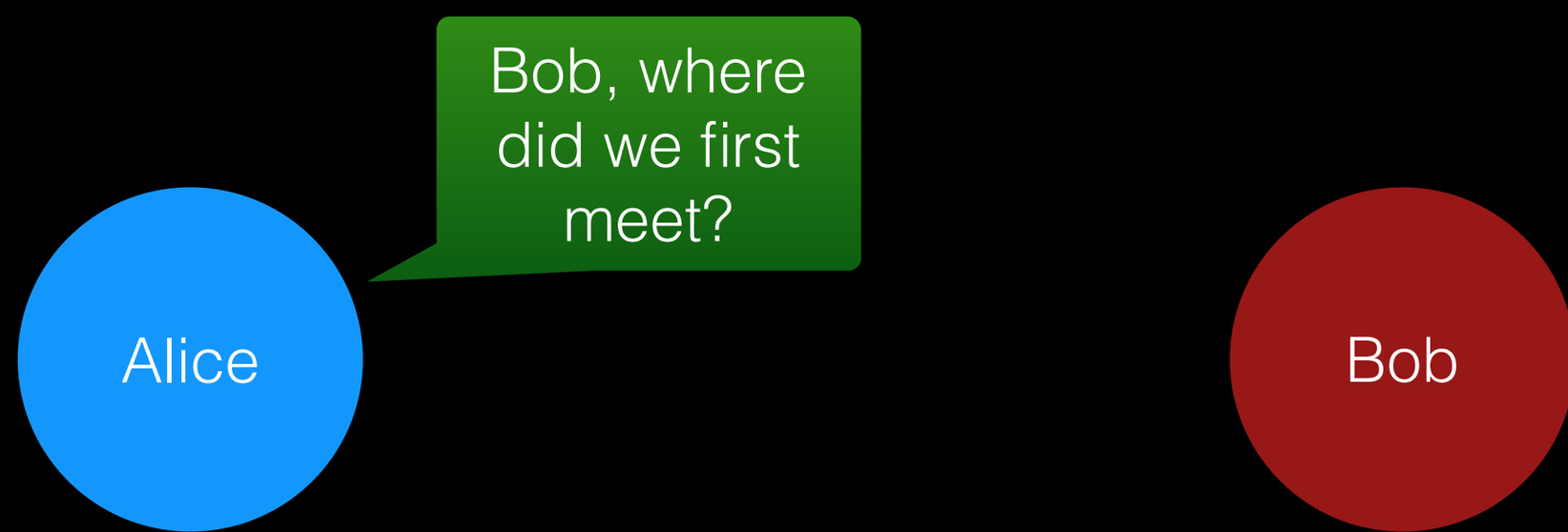
Socialist Millionaires Protocol



Socialist Millionaires Protocol

Alice and Bob have a shared secret that **only** they know.

Socialist Millionaires Protocol



Socialist Millionaires Protocol

Socialist Millionaires Protocol

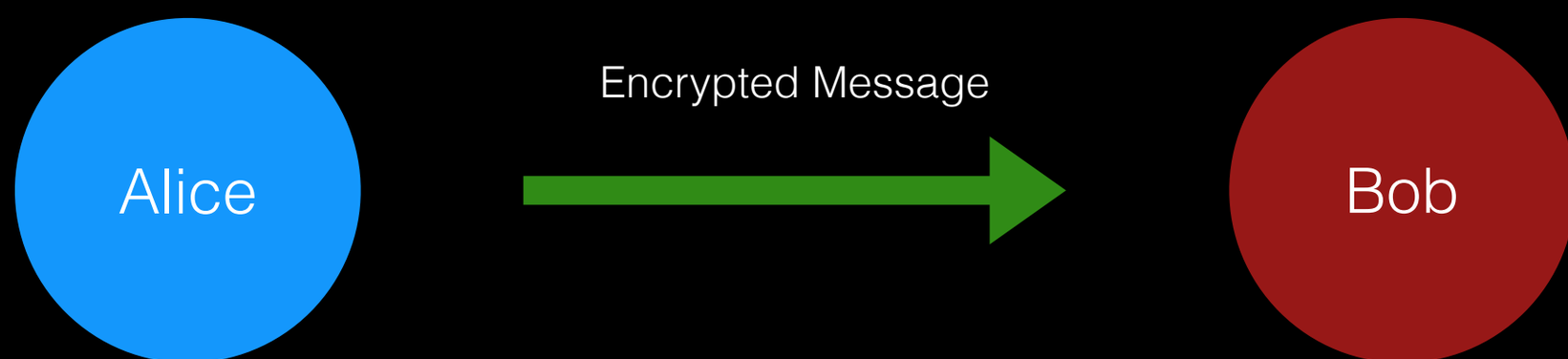
Because Bob knew the answer, Alice and Bob are now **authenticated**.

If Bob had gotten the answer wrong, Alice would have known that she **is not** communicating with the right Bob.

Be creative and careful with your question **:-)**

Deniability

Bob is sure that Alice **sent** the message.

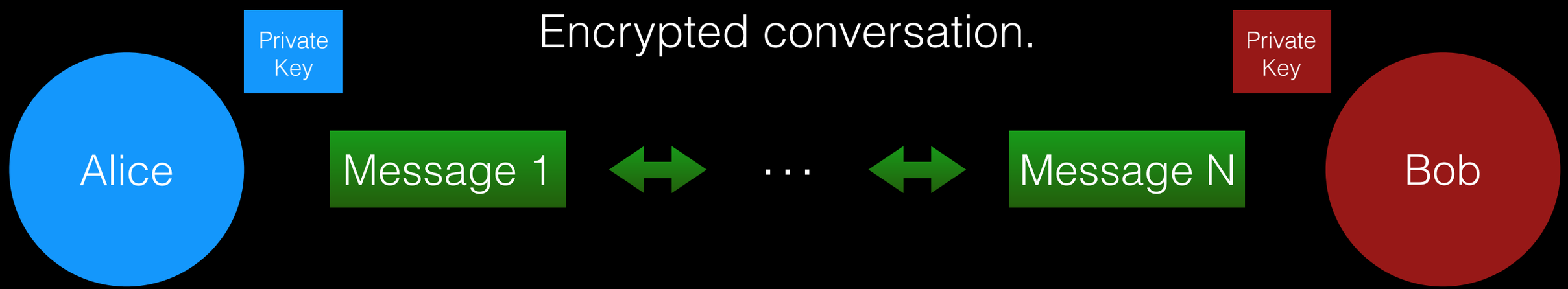


But, Bob cannot prove that Alice **wrote** the message.

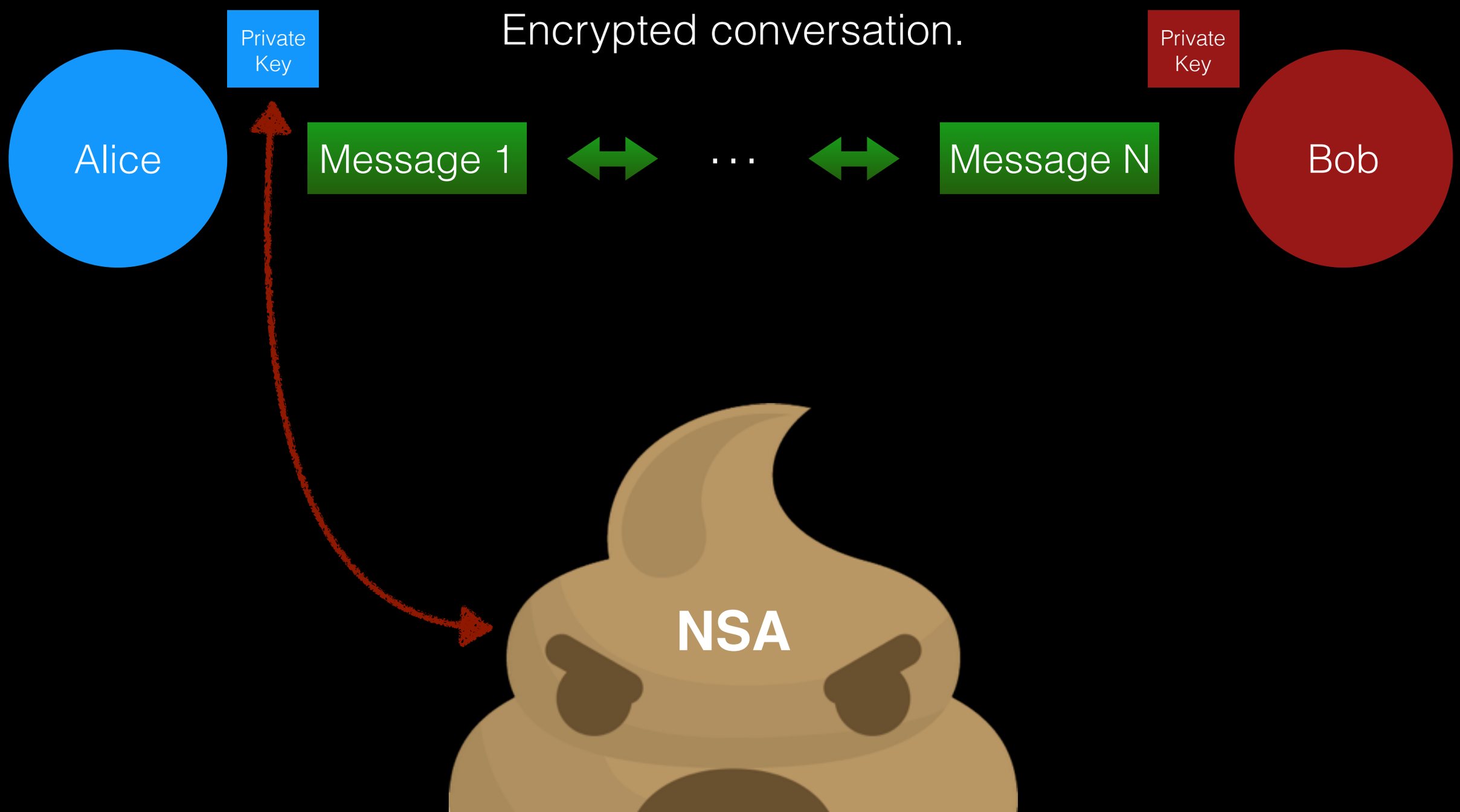
Deniability

Have yet to be tested in court **:-)**

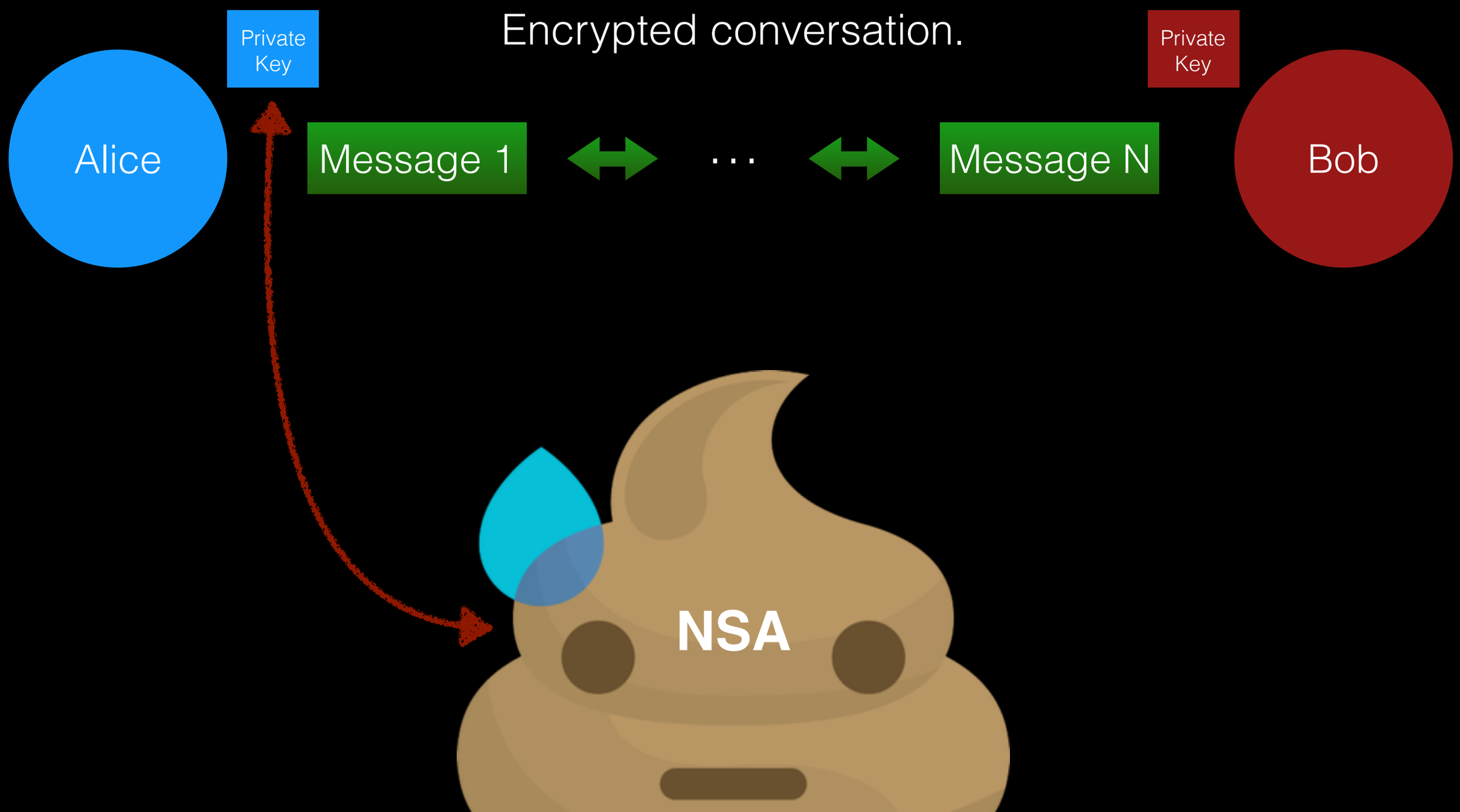
Perfect Forward Secrecy



Perfect Forward Secrecy



Perfect Forward Secrecy



Questions?

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05B4D6F3 C9B88F7C 1A99C3A4 4723D542 3BD3C3F0