Asymmetric encryption for **confidentiality**

Bob encrypts a message $\mathbf{m}$ with Alice's public key $\mathbf{Kp_A}$

➡ Nobody can decrypt $\mathbf{m}$, except Alice with her private key $\mathbf{Ks_A}$

✓ Confidentiality without the need to exchange a secret key

K_{SA}, K_{pA}

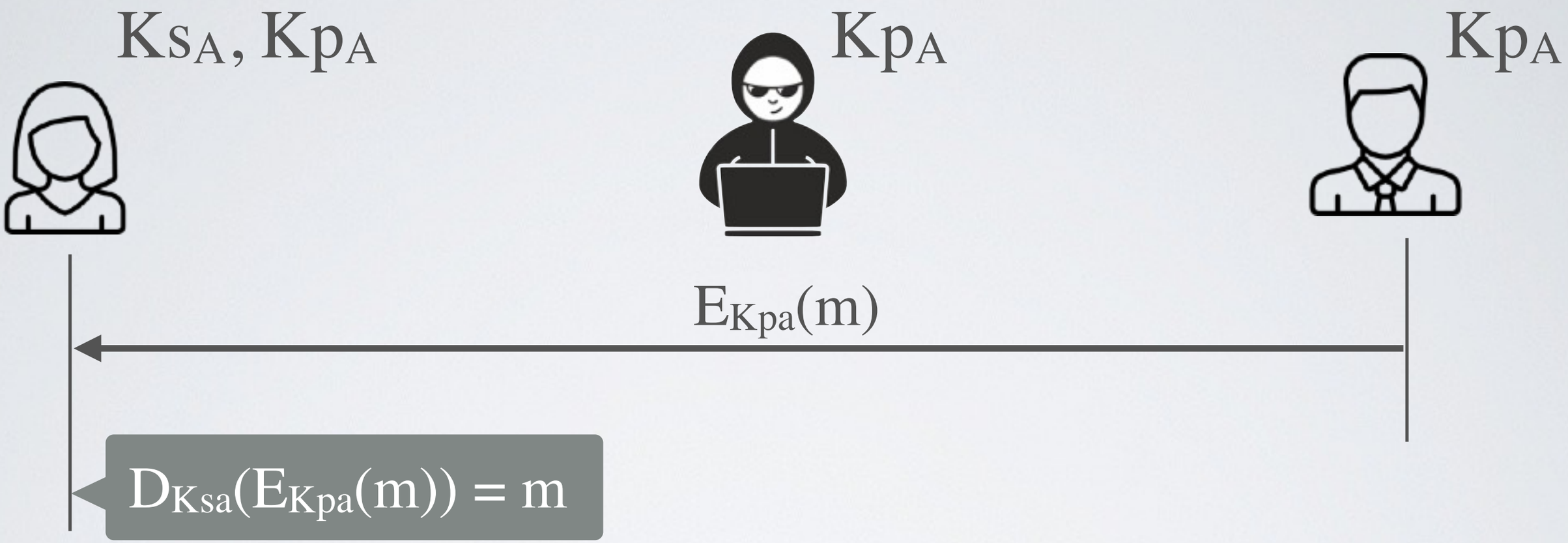

Кра


Кра


$E_{Kpa}(m)$

$$D_{Ksa}(E_{Kpa}(m)) = m$$

Asymmetric encryption for **confidentiality**



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RSA - Rivest, Shamir and Alderman

Key Size	1024 - 4096
Speed	~ factor of 10^6 cycles / operation
Mathematical Foundation	Prime number theory

Most widely used to secure network traffic

Adopted in 1977