



(Picture credit: Reuters.)

How to manipulate standards

Daniel J. Bernstein

University of Illinois at Chicago &
Technische Universiteit Eindhoven



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is under attack from
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Maybe 56-bit DES.

Feasible to search
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plaintext or key is visible
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Move towards more accurate
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e.g. protocol ECDH_V :

- 1. Jerry generates E, P, S .
0. Public checks $V(E, P, S)$.
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- 1. Jerry generates E, P, S .
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- 1. Jerry generates E, P, S .
0. Public checks $V(E, P, S) = 1$.
1. Alice generates secret a , sends aP on E .
2. Bob generates secret b , sends bP on E .
3. Alice computes abP .
4. Bob computes abP .
5. Alice and Bob convert abP into AES key.

What is V ?

Which curves will public accept?

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Will he accidentally help us?

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Bob generates secret b ,
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