Signatures

Watson Lado

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Watson Ladd

22 June 2015

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Signatures

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• Let G be the generator of an Edwards curve, encoded in the way everyone is doing it

Public key A = aG, compute r = H(v||M), R = rG, c = H(M||R), s = r - ca. Send R, s

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Or use SHA3, which has arbitrary length output

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- Solution: Use *r* as the key for HMAC of a counter value
- Or use SHA3, which has arbitrary length output
- Mandate double length scalar: no reason to think harder!



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Security

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- Assume keys are not used with different hash functions!
- Otherwise we have nonstandard, untested assumptons
- Under mild assumtions repalce r with random number

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Apply Forking Lemma



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Batchable

 "Online": only need to store two hash states for one pass through M

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Avoids trouble spots for implementors

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- Avoids trouble spots for implementors
- Most proposed schemes have this property

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- Avoids trouble spots for implementors
- Most proposed schemes have this property
- But most are somewhat more complicated