

Really fast

syndrome-based hashing

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Joint work with:

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Remember FSB?

SHA-3 submission by Augot–

Finiasz–Gaborit–Manuel–Sendrier.

FSB compression function

(plus Whirlpool output filter).

Simple compression function.

Well-understood attack ideas:

information-set decoding,

linearization, Wagner.

FSB-256 seems quite secure.

Bad: Not actually fast.

Schwabe asm, Core 2 Q9550,

FSB-256: 95.53 cycles/byte.

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What we've done:

RFSB compression

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RFSB-509: 13.62 cycles/byte

Faster than SHA-256

faster than JH;

faster than Grøstl.

Plus extra speed for

incremental hashing

fast batch verification

Cost $> 2^{128}$ for all

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