

#### Open Source Implementations of Hash Functions in an Atmel AtTiny45

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> - Crypto 2012 rump session -Presented by Olivier Pereira



### Project goal

- Implement several algorithms
  - On the same platform (Atmel AVR AtTiny45) ©
  - With similar guidelines, the same interface  $\odot$
  - − But different programmers ☺



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- Main message: open source codes, available online!



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  - AES, DESXL, HIGHT, IDEA, KASUMI, KATAN, KLEIN, mCRYPTON, NOEKEON, PRESENT, SEA, TEA



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#### **ECRYPT II** ାଙ୍©ି©^ ‡

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• New contributions still welcome!



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  - SHA256 and the SHA3 candidates
  - Lightweight hash functions
  - Block cipher based constructions
- Work in progress, many source codes already available:

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#### For example: code size x cycle count (beware of different scales!!!)





## **THANKS!**

# More benchmarking on the website http://tinyurl.com/openhash

#### Full paper to appear...