

Seminar in Cryptography: research projects

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Study of code locality

0	1	1	0	0	1	1	1	0	0	1	1
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Parikshit Gopalan, Cheng Huang, Huseyin Simitci, Sergey Yekhanin, "On the Locality of Codeword Symbols", *IEEE Transactions on Information Theory* 58(11), pp. 6925-6934, 2012.

Study of code locality

0	1	1	0	1	0	1	1	0	0	0	1
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Study of code locality

0	1	1	0	1	0	1	1	0	0	0	1
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Classical error correction

Study of code locality



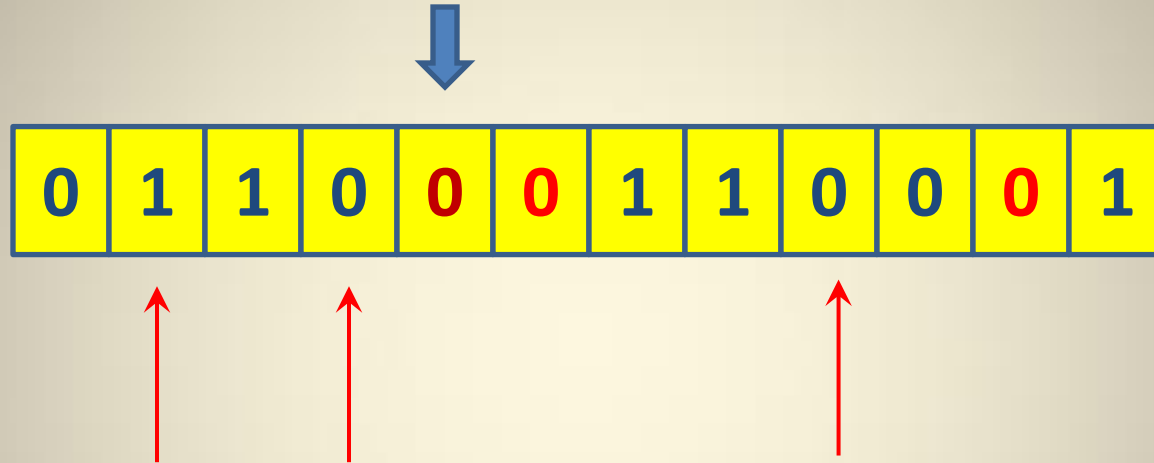
Classical error correction

Study of code locality



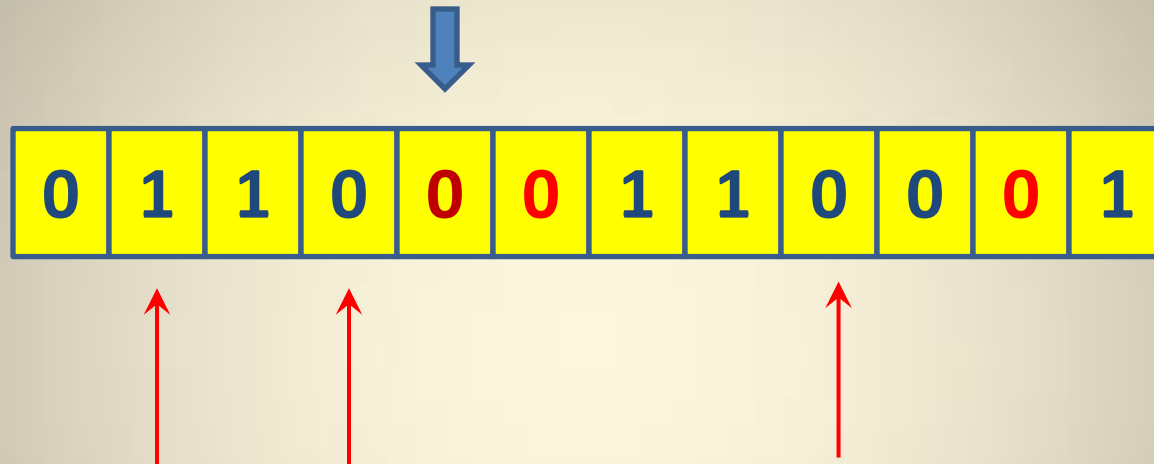
Local error correction

Study of code locality



Local error correction

Study of code locality



Local error correction

Locality: the number of symbols read in order to recover one bit

Comparison of security measures against identity theft in various countries

Identification of residents in different countries:

- **USA, Canada:** social security number
- **Germany, Switzerland:** passport
- **Estonia:** ID card



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