BILL, RECORD LECTURE!!!!

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Other Topics I Could Have Covered

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1. Playfair Cipher. This is a nice 2-sub cipher.

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CON Details on how they cracked it are too detailed.

1. Rabin Enc, and variants: Cracking \equiv factoring.

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2. Goldwasser-Micali Enc: Cracking \equiv SQRT mod *pq*.

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1. Quadratic Sieve Factoring.



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 BILL'S CON Writeups are terrible. Don't know it yet.

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1. Baby-Step Giant-Step Algorithm.

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There is a better way to do secret sharing with cards that transmits slightly more bits.

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PRO I know it and I like it and its not that hard.

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I may be wrong about this.

We did Information-Theoretic Secret Sharing

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We did Information-Theoretic Secret Sharing

1. **Recall** Info-Theoretic: shares are size $\geq |s|$.

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1. Recall Info-Theoretic: shares are size $\geq |s|$. IF give the players comp limits then can do Secret Sharing with shares of size $\leq \beta |s|$ where $\beta < 1$.

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CON Both Esoteric, thought not as much as the cards-stuff.

Non-Ideal Secret Sharing

Prove that certain access structures **cannot** have Ideal secret Sharing.

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More Fun for Me then for You!

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1. Digital Signatures: Proving that Irene send the email calling Bill a crazy croissant.

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2. MD5 and other stream ciphers that are really used.

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PRO Hot topic.

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4. Security of Electronic Voting.

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 Digital Signatures: Proving that Irene send the email calling Bill a crazy croissant.
 PRO Really Used.
 CON Really Boring.

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- MD5 and other stream ciphers that are really used.
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- 3. Bitcoin.

PRO Hot topic.

PRO Uses other parts of the course.

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CON Very detailed protocols.

CON Other problems with voting— gerrymandering, disenfranchisement, replacing non-partisan voter commissioners with lackeys.

Proofs of Security, More Rigor

No Fun for me or for you.

