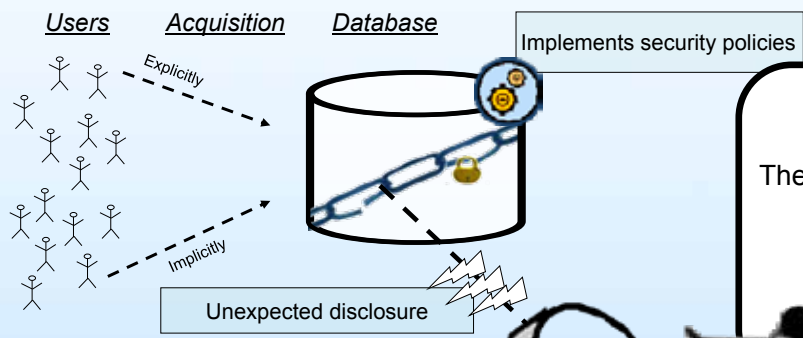


Data Degradation: Making Private Data Less Sensitive Over Time



Piracy: even most secure database are hacked (FBI [2006], NASA, Pentagon)
Negligence: e.g., AOL scandal
Weak policies: major online companies such as Google, Amazon

Threat Model

The server is honest, but eventually vulnerable to:

- Piracy attacks
- Weak policies
- Negligence



Bad-intentioned scrutinization!

The business of personal information leaks (e.g., Intelius, ChoicePoint)

Hypothesis

Many *especially long lasting* services can still benefit from **less accurate** data.

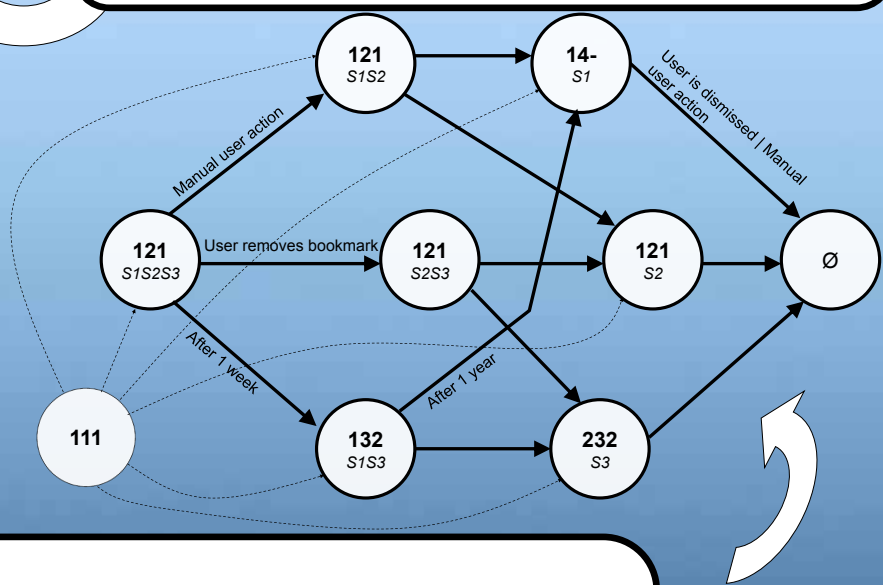
Huge Privacy Risk

- Digital trails are highly personal
- Everybody is impacted

Our Approach

Making private data less sensitive over time.

Example:



Example

Enterprise uses web trails as source to increase work efficiency. Services are:

- S1:** corporate bookmarks
- S2:** sharing web trails with colleagues
- S3:** corporate expert search system

	url	time	duration
111	url	second s	seconds
121	url	days	seconds
14-	url	months	-
232	domain	weeks	{short,long}

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Challenges

- Build, bind, and enforce policies
- User-oriented and personalized policies
- Update and query semantics
- Optimization
- Metrics