



Addressing Data Reuse Issues at the Protocol Level

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Issues Addressed

#1: Personal Information on the Web

- Increasing amounts of personal information on the Social Web
- Often times there are unforeseen adverse consequences
- Users become victims of poor design choices: *E.g. Facebook Beacon, Google Buzz, etc*



#1: Personal Information on the Web

- Users do not understand how to use privacy controls effectively: E.g: Google Latitude
- Web is an easy medium to copy and paste
- How can we make sure that these information misuses do not happen?

#2: Reuse of Creative Works

- There's so much content on the Web
 - 3.6 billion images on **flickr**
 - 20 hours of video uploaded every minute on **You Tube**
Broadcast Yourself™
- Content reuse is good
 - Prevents redundant work
 - Promotes creativity

#2: Reuse of Creative Works



- But even with these mechanisms, content misuse is pretty common
- How can you prove that someone has violated your usage restrictions?

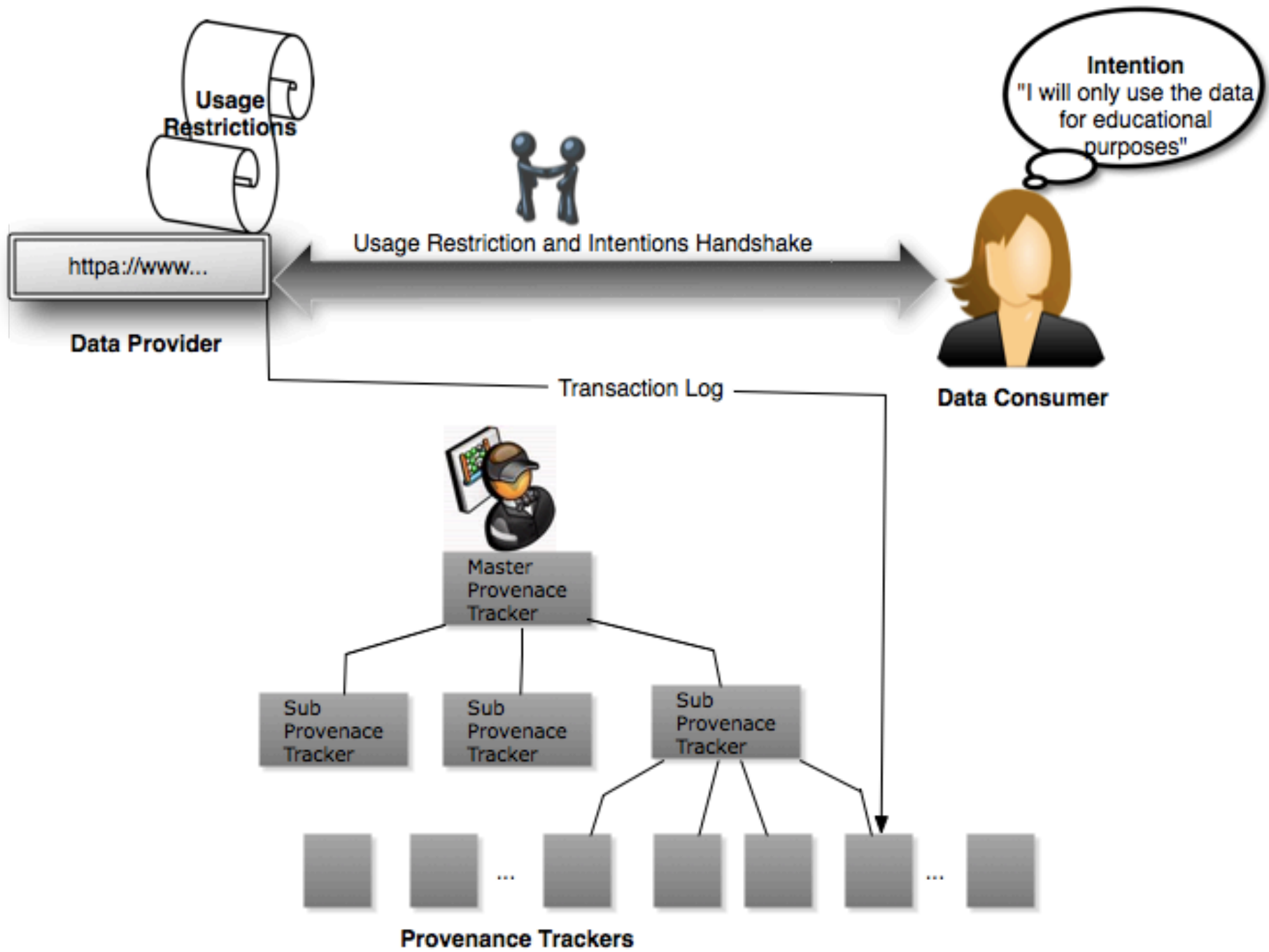
Proposed Solution

HTTPA

Accountable Hyper Text Transfer Protocol

Accountability to Supplement Access and Usage Control





Usage Restriction Specification

- Initial Implementation of the protocol will use the RMP (Respect My Privacy) ontology
- Usage Restriction needs terms such as:



Your Data is Used Only for
the Intended Use

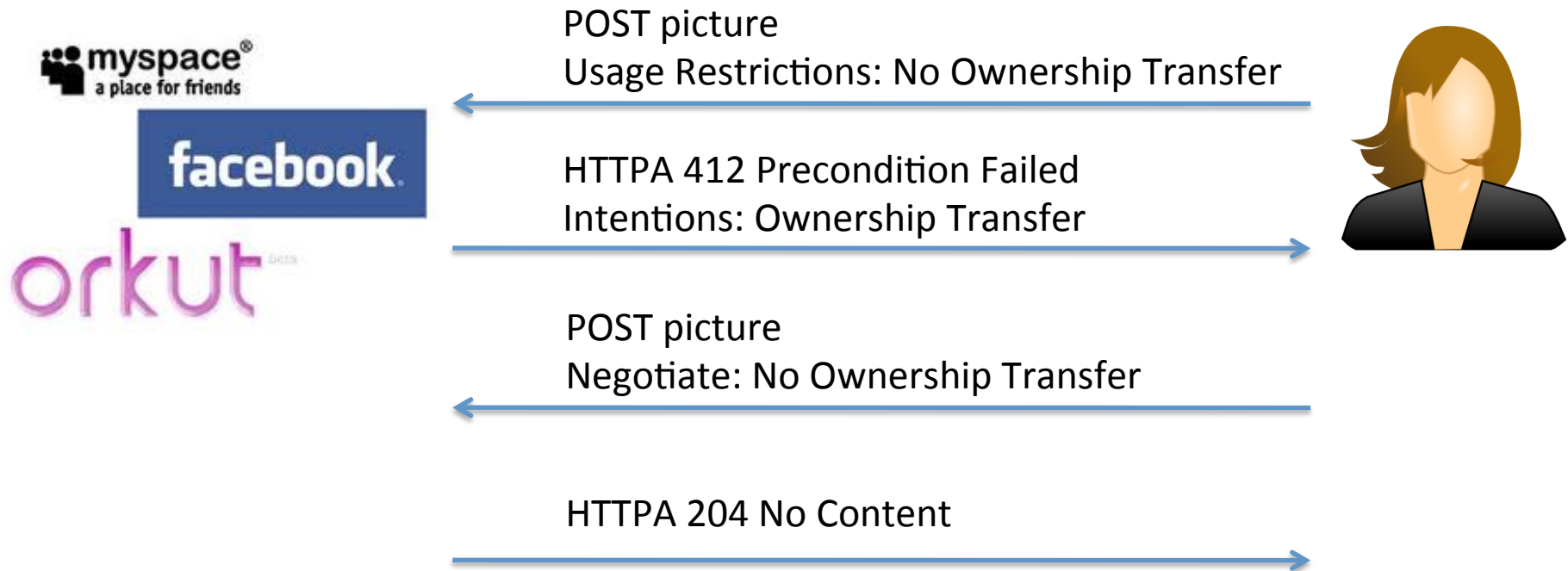
- No tracking
- No ownership transfer
- No commercial use
- No depiction
- No employment use
- No insurance use

Negotiation of Usage Restrictions and Intentions / Handshake

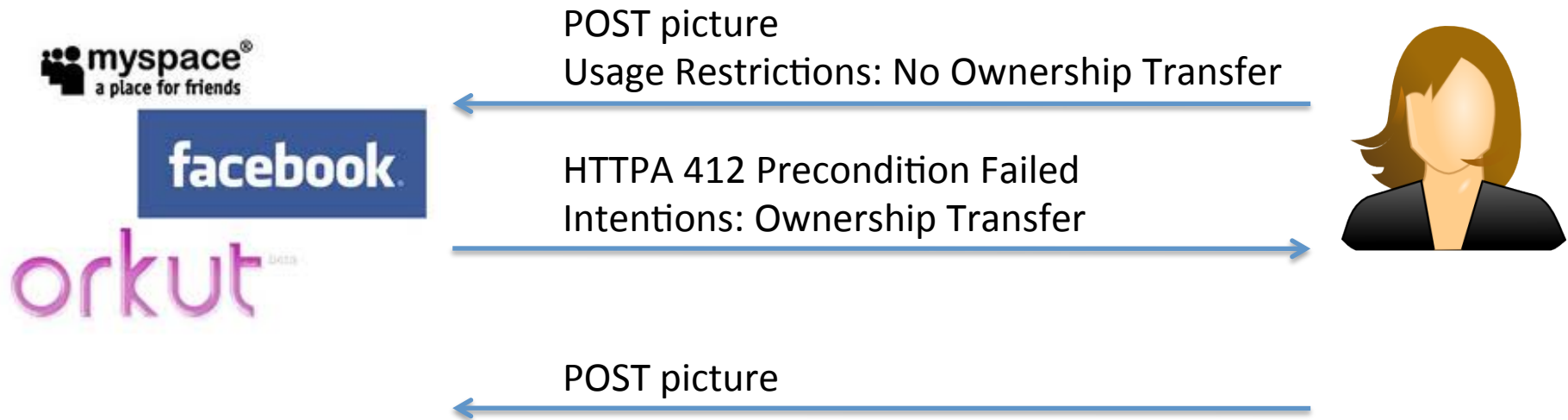


- Uses HTTP headers '**usage-restrictions**' and '**intentions**'
- Use '**negotiate**' when the original usage restrictions and intentions do not match

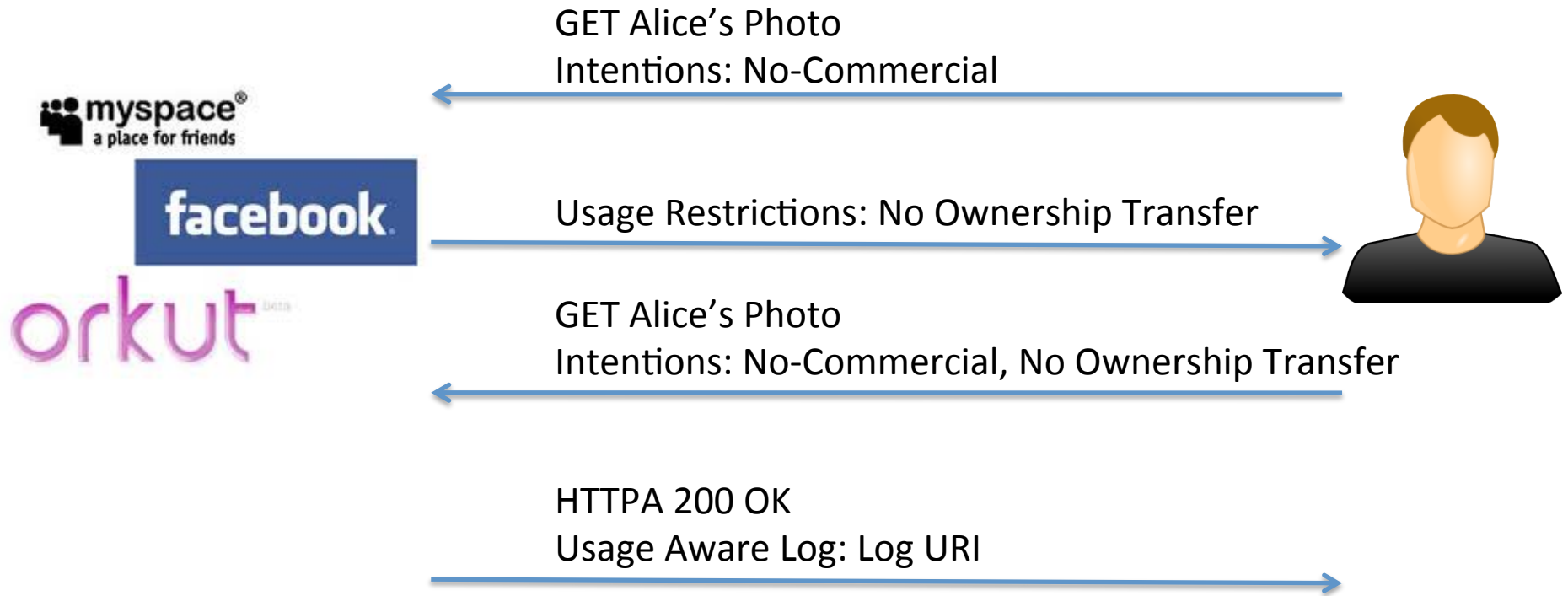
Data Uploaded to Websites (I)



Data Uploaded to Websites (II)



Data Downloaded from Websites



Conclusions

- **Policy enforcement** is not enough to solve security and privacy problems on the web.
- We need a **web ecosystem** supporting **accountability** to supplement policy enforcement.

WE'RE IN A NARROW WINDOW IN WHICH PEOPLE ARE USING GOOGLE LATITUDE, BUT HAVEN'T LEARNED THE HABIT OF TURNING IT OFF WHEN THEY'RE DOING SOMETHING DISCREETLY.

I WROTE AN APP TO LOG FRIENDS' LOCATIONS AND WORK OUT ADDRESSES AND BUSINESS NAMES.



LOCATIONS		
TIME	MEGAN	ROBER
11:00 AM	HOME	
12:30 PM	EASTVIEW ADULT TOY STORE	HOME
1:30 PM	HOME	
2:00 PM	LAKETOWN SEX TOY SHOP	SCHOOL
2:30 PM	HOME	
3:00 PM	FRY'S ELECTRONICS	
3:30 PM	ED'S POWER TOOL EMPORIUM	SUBWA
4:00 PM	HOME	
4:10 PM	HOSPITAL BURN WARD	

Questions?
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