

Problems with Phorm

Dr Richard Clayton



London
15th April 2008

Problems with Phorm

- Proposition
- Stability Issues
- Interception
- Defamation
- Data Protection
- Privacy

Distilled pages

attack

CleanFeed

format

inquiry

ISP

legal

packets

paper

PDF

system

content

document

event

partners

Phorm

PIA

privacy

School

system

Thinking

advertising

consumers

leading

OIX

online

Phorm

technology

Virgin

websites

Webwise

blog
comment
guardian
meeting
Offensive
Phorm
problem
reference
Unsuitable
written

This is what all those rubbish search engines
used to do before Google came along!

Advertisers

- Want to know what you do, not who you are
- Break people down into categories
 - ABC1, “empty nesters”, lots of fancy new names....
- So they can live with anonymity
- But will car adverts work on a book review site?
- Will adverts annoy?
 - what if you’ve already bought?
 - what if it’s supposed to be a surprise?

Has to be “opt in”

- May be processing “sensitive personal data” (religion, trade union, medical etc)
<h1>Vicar Union advice on living with AIDS</h1>
 - DPA requires an informed opt-in for this
- Information Commissioner says that Privacy and Electronic Communications Regulations requires an opt-in
- “Permission-based advertising” is the new black

Stability issues

- Access to new sites goes through three redirects
 - damages browser heuristics on wickedness
- webwise.net is now part of the CNI
 - breaks if webwise.net is “localhost” (127.0.0.1)
- Cookie based opt-out is not “fail safe”
 - standard advice on deleting cookies now wrong

Interception

- RIP 2000 requires permission from both ends of communication before disclosure
- s16 shows Phorm keywords do infringe
- Permission for data TO servers not given
- Permission for data FROM servers not given
- Permission from THIRD PARTIES not given
 - think “email” or “web forum”

BUT... says Phorm

- Detecting “simple auth”
 - but not seeing auth over HTTPS or other auth
- Detecting email services
 - but just 25 in their list
- Will honouring robots.txt (web spider control)
 - but no-one’s heard of Phorm!
 - and they don’t have their own user-agent string
 - and `www.google.com/robots.txt` will disappoint!

Forging cookies

- Phorm impersonates domains to store cookies
- Clearly illegal under s1 of Fraud Act 2006
 - Phorm incites, the ISPs commit the offence
- ALSO leads to defamation claims
 - AND sometimes trademark infringement
 - if site says “we never use tracking cookies” and user inspects their file system then the user will conclude that the website owner is dishonest...

Cookie Tossing

- Cookies removed by Phorm system
- But doesn't prevent JavaScript (etc) access
 - websites can read Phorm identifiers
 - can sell linkage information (not in the EU!)
 - can fetch some Phorm adverts and then reverse engineer the user profile
- Can replace cookies with their own
 - wicked(?) website can opt you out (or in)

Privacy

- Privacy and Data Protection are not the same!
- Data Protection just mechanistic approach to controlling corporations with mainframes
 - and UK has minimal watered down variant
 - to a first approximation, anonymity fixes everything
- Privacy relates to controlled disclosure of information that matters TO YOU
 - your privacy is violated even if you are anonymous

Analogies (no cars!)

- Post Office opening all your letters, so you can get a better class of junk mail.
- TV company scanning everything on your bookshelf (and the magazines under the bed) so you can watch more interesting ads.
- Tesco collating what's on your shopping list so that you can be offered vegetarian menu when you go into McDonalds

Reminder

- The proposition is a long way from proven
- It has to be informed opt-in
- It does not improve stability
- As proposed, it is certainly illegal
- It will be defamatory
- It infringes your privacy

So why on earth are the ISP\$ bothering ?

Problems with Phorm

<http://www.lightbluetouchpaper.org>



**UNIVERSITY OF
CAMBRIDGE**
Computer Laboratory