

# User Study of “consensually acquired” Spyware

# “Consensual Spyware”: oxymoron or not?

- Unlike malware, in some instances users install spyware on their own machines
- Typically occurs through bundling
- Possible explanations for why this happens:
  - It isn't disclosed
  - It's disclosed but not understood
  - It's disclosed and understood but nonetheless installed

# Notice

- Several instances where it is disclosed but notice is in dense EULAs that cover multiple entities, written in legalese
- So we decided to see if user behavior changed if they were provided with either “short notices” or generic warnings

# Study Setup

- User study in laboratory with paid subjects
- Users observed while installing programs and asked to participate in post-interview process
  - Five programs in randomized order (bundled spyware)
  - Three treatment conditions for Notice and Consent
    - EULA
      - Current documents to describe contents
    - Generic + EULA
      - Generic description + original EULA
    - Short EULA + EULA
      - Short description describing contents + original EULA

# Short Notice

- Providing easy to read, easy to understand consequences of installing an application
- Providing this information when the user is in the process of installing the program
- Presenting key information:
  - What and How information is collected?
  - How information is used?
  - Impact of program on computer system?

# Results

- Users have limited understanding of EULA content and little desire to read them.
  - When informed after the fact what a EULA contains regret over installation of certain programs is high.
- Short notices improve understanding, but did not effect behavior in a statistically significant manner.
- Relative privacy matters
  - Given two programs with similar functionality consumers will choose the one they believe to be less invasive

# Conclusions

- If a product provides functionality that a user desires they will knowingly install software they don't want
- Information about data collection practices and machine performance can influence which products individuals install *IF*
  - Information is provided when comparison shopping, during the install process is too late
  - There is an agreement about what must be disclosed and consistent terminology to describe behavior
  - There are competing products with different practices

# Conclusions

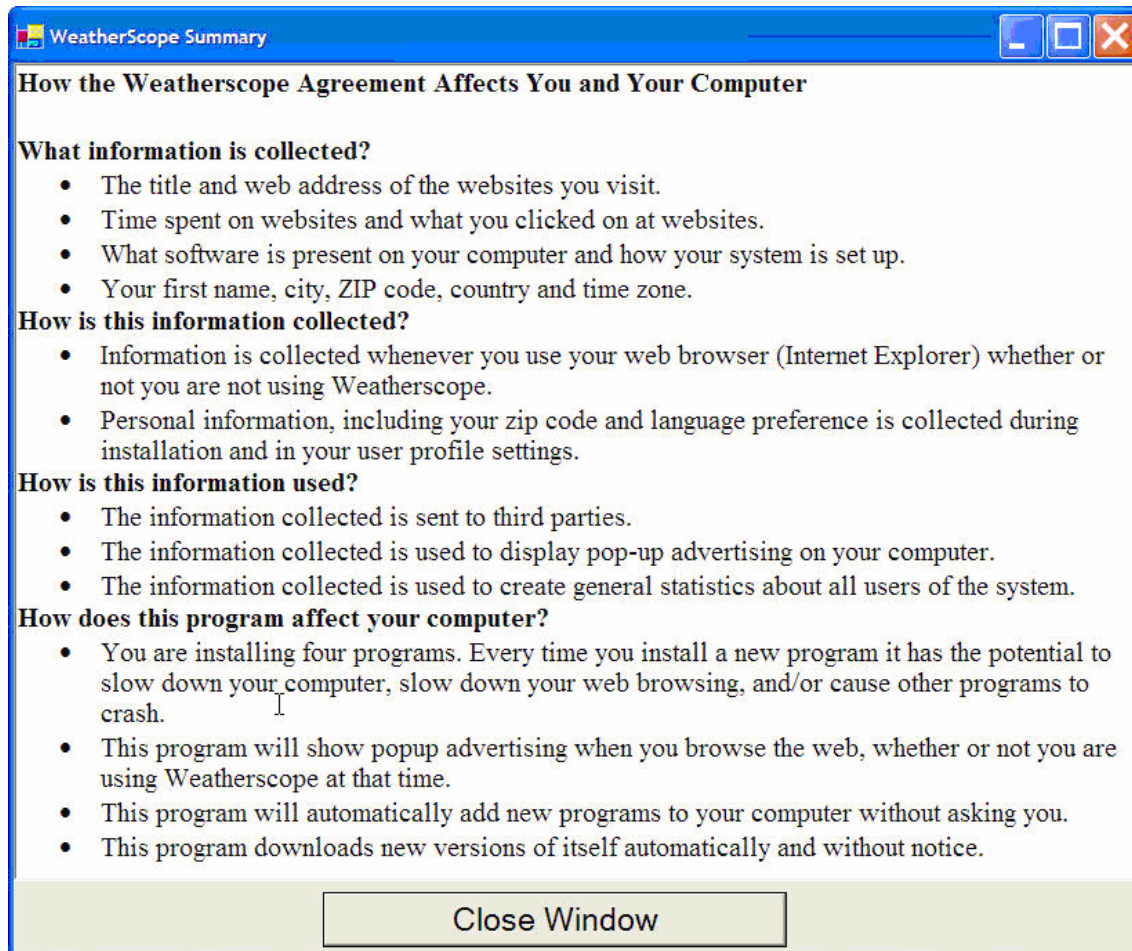
- If the goal is to reduce “spyware” of this sort, then:
  - Relying on improved disclosures and consent procedures may be helpful but it appears insufficient
  - Even with clear notice people will install products that they dislike and will complain later



# Questions

- Is “free” part of the problem?
  - Many products that bundle spyware are “free” to consumers
  - however they impose costs on third parties (complaints, tech support) who have no relation to the transaction
  - given the externalities is there a reason to depart from the pure market model?
  - does it suggest other requirements that might force the parties to the transaction to internalize the cost (my program caused the crash, information about origin of ad)

# Example Short Notice



**WeatherScope Summary**

**How the Weatherscope Agreement Affects You and Your Computer**

**What information is collected?**

- The title and web address of the websites you visit.
- Time spent on websites and what you clicked on at websites.
- What software is present on your computer and how your system is set up.
- Your first name, city, ZIP code, country and time zone.

**How is this information collected?**

- Information is collected whenever you use your web browser (Internet Explorer) whether or not you are not using Weatherscope.
- Personal information, including your zip code and language preference is collected during installation and in your user profile settings.

**How is this information used?**

- The information collected is sent to third parties.
- The information collected is used to display pop-up advertising on your computer.
- The information collected is used to create general statistics about all users of the system.

**How does this program affect your computer?**

- You are installing four programs. Every time you install a new program it has the potential to slow down your computer, slow down your web browsing, and/or cause other programs to crash.
- This program will show popup advertising when you browse the web, whether or not you are using Weatherscope at that time.
- This program will automatically add new programs to your computer without asking you.
- This program downloads new versions of itself automatically and without notice.

Close Window



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