

# How Short Is Too Short? Implications of Length and Framing

## on the Effectiveness of Privacy Notices

Joshua Gluck, Florian Schaub, Amy Friedman, Hana Habib,  
Norman Sadeh, Lorrie Faith Cranor, and Yuvraj Agarwal,  
Carnegie Mellon University, Pittsburgh

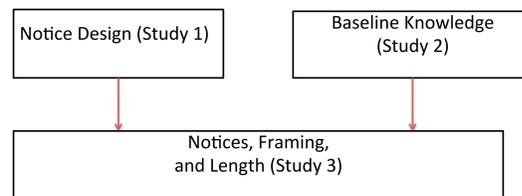


### (1) Privacy Policies

- We are inundated with Privacy Policies
- They are
  - Too Long
  - Often in Legalese
  - People don't read them
- We make shorter privacy notices, but including all of the pertinent information in the Notice can still generate a long Notice
- Two key ideas
  - Add framing statements to increase focus and attention
  - Remove 'well-known'/expected practices, to allow greater focus on practices that are surprising
  - Goal of leading to higher awareness of all Privacy Practices

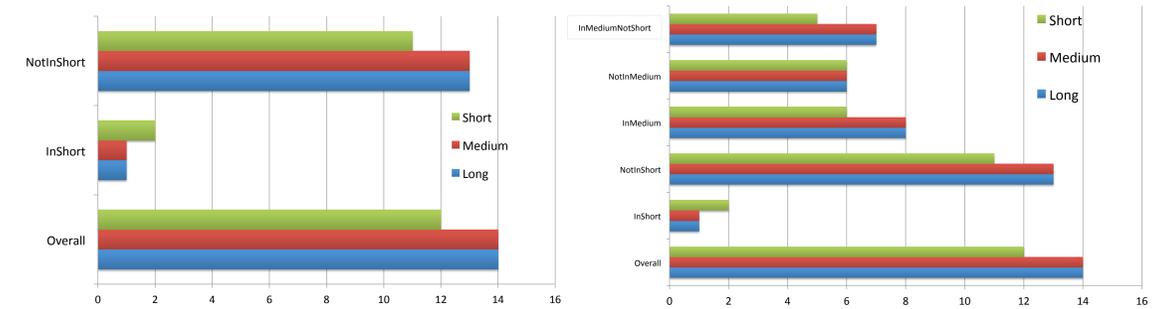
### (3) Our Study

- Three Phase M-Turk Study
- Phase 1 Notice Design (200 Mturkers over 4 Conditions, What Notice Format is Best)
- Phase 2 Baseline Knowledge (70 Mturkers, 1 Condition, What Fitbit Practices are Known with NO Notice)
- Phase 3 Notices, Framing and Length (400 Mturkers, 10 conditions (3 x 3 Positive/Negative/Neutral Framing x Short/Medium/Long + Control (i.e. No Notice))



### (5) Results

Framing had no Significant Effect on Practice Awareness. No Interaction between Framing and Length. All Conditions did Better than the Control.



Medium and Long Length conditions performed equally. Short Length notices did worse, particularly on practices removed from the shortest notice.

Medium Length notices performed the same, even on practices removed from the Medium Length notices. Short notices performed significantly worse on practices from the Shortest notice, but only slightly better on practices remaining in the Shortest notices.

### (2) Privacy Practices

- We chose to examine Fitbit Privacy Practices
  - Fitness Wearables are a growing market
  - Fitbit is the market leader in Fitness Wearables
  - Wide range of information collected
- Determined a list of Collection, Sharing, Selling, and Storage practices from Fitbit Website.
  - Asked questions about these practices

Question	Definitely Collects	Probably Collects	Might Collect	Might not Collect	Probably Does not Collect	Definitely Does not Collect	I'm Unsure
12. Imagine you are using a Fitbit Surge, which of the following types of information do you think Fitbit would collect about you*							
Your location, when location features, such as maps, are active							
Your name, height, and weight							
Your age, distance and stairs climbed							
When and how long you exercised							
When and how long you sleep							
Your heart rate throughout the day							
Exercise compared with Friends							
Information posted to your profile							
Your mood							
Your altitude							
Your shoe size							
How many steps you've taken							
How far you've walked							
Information you've posted to your Fitbit profile							
Your name							
A list of your Facebook friends							

### (4) Our Notices

#### Positive and Negative Framing

Fitbit may share or sell aggregated information that does not identify you.

**Selling your aggregated de-identified data allows Fitbit to provide Fitbit devices at lower cost, with no service charges.**

Find further sharing practices at Fitbit.com/privacy

Fitbit may share or sell aggregated information that does not identify you.

**It is sometimes possible to identify an individual from de-identified data.**

Find further sharing practices at Fitbit.com/privacy

Long(100%) Medium(85%) and Short(70%)

**With an account, Fitbit will collect:**

- Your location, when location features, such as maps, are active
- Your name, height, and weight
- Your age, distance and stairs climbed
- When and how long you exercised
- When and how long you sleep
- Your heart rate throughout the day
- Exercise compared with Friends
- Information posted to your profile

You can track your heart rate, distance and step count with your Fitbit, without needing an account.

Find further sharing practices at Fitbit.com/privacy

**With whom do we share data?**

- Government Entities
- Companies providing services to Fitbit
- Organizations you specifically direct Fitbit to share data with (e.g. Facebook)
- Fitbit friends you've listed (opt-out of sharing with friends in your profile settings)

Fitbit may share or sell aggregated information that does not identify you.

**Selling your aggregated de-identified data allows Fitbit to provide Fitbit devices at lower cost, with no service charges.**

Find further sharing practices at Fitbit.com/privacy

**How long do we keep your data?**

- Personal information, such as your address, is removed when you delete your Fitbit account.
- Sensor information that cannot identify you, such as fitness data, is kept indefinitely.

Until you delete your Fitbit account, anything you've ever posted will be kept by Fitbit, regardless of deleting your profile.

Full Fitbit Privacy Policy: www.fitbit.com/privacy

**With an account, Fitbit will collect:**

- Your location, when location features, such as maps, are active
- Your name, height, and weight
- When and how long you exercised
- When and how long you sleep
- Your heart rate throughout the day
- Exercise compared with Friends
- Information posted to your profile

You can track your heart rate, distance and step count with your Fitbit, without needing an account.

Find further sharing practices at Fitbit.com/privacy

**With whom do we share data?**

- Government Entities
- Companies providing services to Fitbit
- Organizations you specifically direct Fitbit to share data with (e.g. Facebook)
- Fitbit friends you've listed (opt-out of sharing with friends in your profile settings)

Fitbit may share or sell aggregated information that does not identify you.

**Selling your aggregated de-identified data allows Fitbit to provide Fitbit devices at lower cost, with no service charges.**

Find further sharing practices at Fitbit.com/privacy

**How long do we keep your data?**

- Personal information, such as your address, is removed when you delete your Fitbit account.
- Sensor information that cannot identify you, such as fitness data, is kept indefinitely.

If you ever have a problem with Fitbit's data practices, simply delete your account and your personal data will no longer be stored.

Full Fitbit Privacy Policy: www.fitbit.com/privacy

**With an account, Fitbit will collect:**

- Your location, when location features, such as maps, are active
- Your name, height, and weight
- When and how long you exercised
- When and how long you sleep
- Your heart rate throughout the day
- Exercise compared with Friends
- Information posted to your profile

You can track your heart rate, distance and step count with your Fitbit, without needing an account.

Find further sharing practices at Fitbit.com/privacy

**With whom do we share data?**

- Government Entities
- Organizations you specifically direct Fitbit to share data with (e.g. Facebook)

Fitbit may share or sell aggregated information that does not identify you.

**Selling your aggregated de-identified data allows Fitbit to provide Fitbit devices at lower cost, with no service charges.**

Find further sharing practices at Fitbit.com/privacy

**How long do we keep your data?**

- Personal information, such as your address, is removed when you delete your Fitbit account.
- Sensor information that cannot identify you, such as fitness data, is kept indefinitely.

Full Fitbit Privacy Policy: www.fitbit.com/privacy

### (6) Discussion and Conclusions

- Short-Form notices were beneficial
  - All notices outperformed control
  - Fitbit/Other companies do not currently use any type of short-form notice
- No effect of framing on awareness
- Shortest notices led to reduced awareness
- Medium notices led to equal awareness
- Some practices CAN be removed with no negative effect.
  - Did not lead to improved awareness, but shows some information can be removed, possibly for reduced screen space?
- Older Participants/Women are more aware
  - Diverse samples are necessary for testing
- There is a lower bound to notice length
  - Information MUST be included, at a certain point
- More focus should be spent on timing/layered notices.
  - Specific results may not be generalizable, but the procedures/path specified are (e.g. 85%/70% cutoff from baseline)

