VapeTracker

Tracking Vapor Consumption to Help E-cigarette Users Quit

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Rise & Safety of E-Cigs

‣ Current evidence suggests that e-cigarettes (Fig. 1) may be a healthier alternative to smoking, but still not without risks [1]

‣ A 2015 report shows there are currently 2.6 million adults in Great Britain using electronic cigarettes, of which approximately 1.1 million are ex-smokers

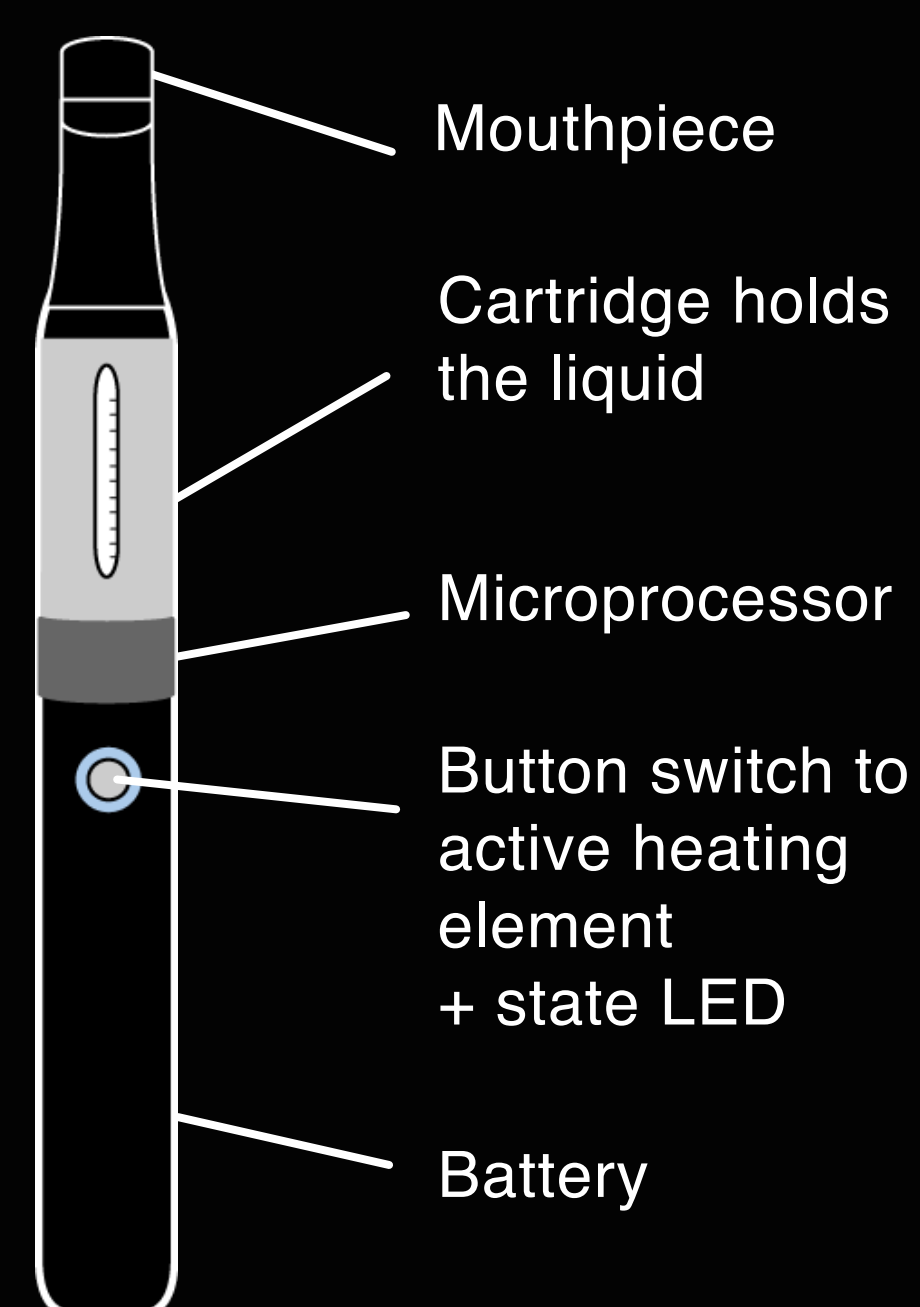‣ We assume that people would like to quit smoking and vaping altogether

Mouthpiece

Cartridge holds the liquid

Microprocessor

Button switch to active heating element + state LED

Battery

Fig. 1

Questions

‣ What information related to vaping activities should be tracked in order to aid in vaping cessation?

‣ How can we design a tracking device that can be used with e-cigarettes that fulfils such a goal?

Understanding Vapers

‣ 249 respondents (223 male) aged between 15 and 67 ($\bar{x}$ = 31.3, s = 11) answered web survey

‣ 84.3% are ex-smokers
84.7% used a third generation Mod device
92.3% stated they vape both in- and outdoors
44.1% used 3-6mg nicotine bottles
24.9% refilled once a day

‣ 46.2% vaped as a means to quit both smoking and vaping altogether

We asked:

‣ whether respondents were aware of how much they vaped during the last week

‣ whether they felt they lost track of how much they vaped on a given day

‣ which grasping behavior (Fig. 2) most closely resembles how they hold their device

‣ what feedback type would they find most helpful if they were attempting to quit vaping (Table 1)

(A)

(B)

(C)

Fig. 2*

Survey Insights

‣ Only 16% of respondents said they were not aware of how much they vaped in the last week

‣ Only 20% stated they lost track of how much they vaped on a given day

‣ Grasp C received the highest votes (220), followed by B (55) and A (27)

| Feedback Type	Frequency
Comparison to number of smoked cigarettes	145
Comparison of vaping activity to other vapers	85
Vape counts per day/week/month	**72**
Such information would not help quitting	66
Vaping session counts per day/week/month	52
Locations of highest vape activity	39
Person(s) who I vape with	26
Other	26
Day/week/month with highest vape count	23

Table 1

Tracking Vape Counts

Joyetech® eGo-C e-cigarette

LightBlue Bean® board

RGB NeoPixels® strip

Capacitative button
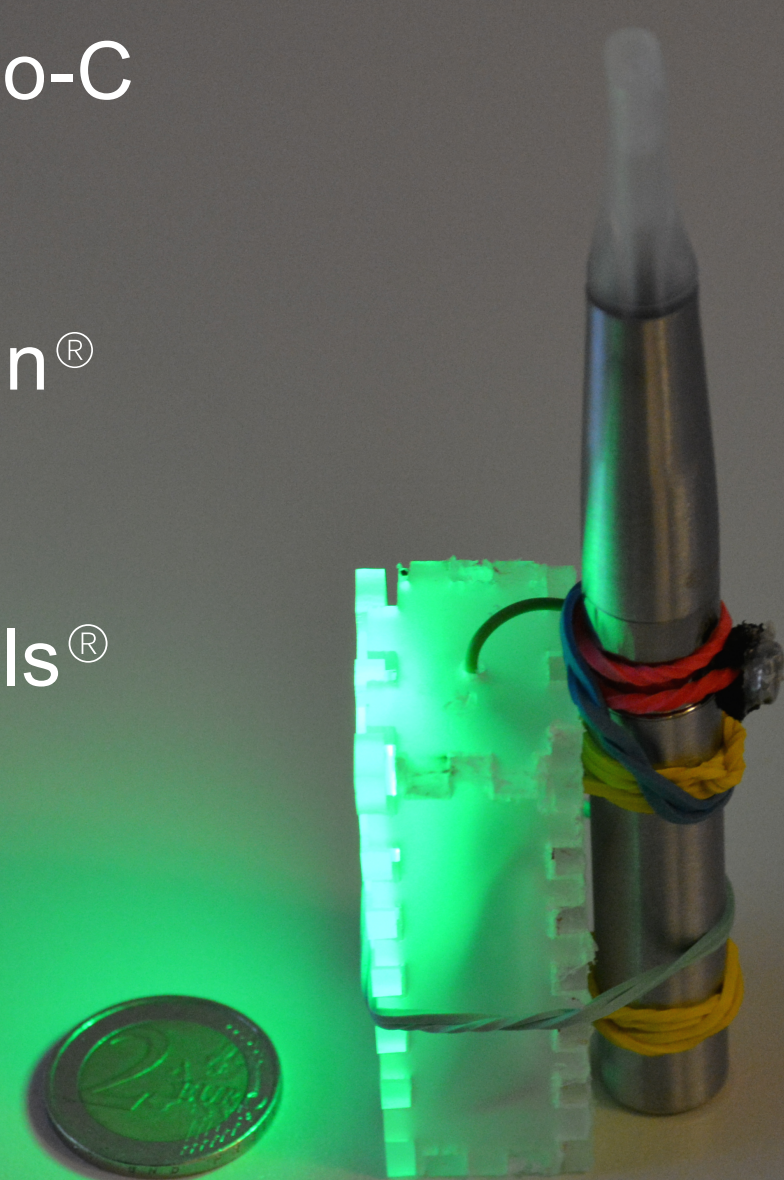
Next Steps

‣ Form factor of VapeTracker, ensuring ergonomics, usability, and social acceptance

‣ Role of ambient on-device feedback (using LEDs)

‣ Psychological models of behavioral change

‣ Smart user-aware notifications

* Flickr® Creative Commons. Credit: Vaping360.com

[1] K. E. Farsalinos and R. Polosa. 2014. Safety evaluation and risk assessment of electronic cigarettes as tobacco cigarette substitutes: a systematic review. Ther Adv Drug Saf 5, 2 (Apr 2014), 67–86.

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