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Demo: Interactive Visual Privacy Control

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Introduction

Privacy issues are raised by ubiquitous cameras

- Being recorded by unauthorized or unnoticed cameras
- Media data may be uploaded online, or used by malicious applications

Figure 1. Ubiquitous cameras. (Google Glass, LifeLogger, Narrative Clip 2, and htc RE Action Camera)

Approach

An interactive visual privacy control framework

- Allowing individuals to deliver their privacy control preferences via visual indicators
- Device will automatically performing control operations such as blurring face

Visual Indicators

They are visual clues that should be:

- Efficiently detectable
- Uniquely identifiable
- Easy to use
- Robust for a variety of applications

Visual Indicators

So we use static tags and flexible hand gestures as privacy indicators.

As showing gestures are active behaviors, we give gestures higher priority, which means they can override tags.




Figure 2. Our privacy indicators.

System Overview

The privacy control framework is composed of privacy indicator detection, face detection, and rule enforcement components.

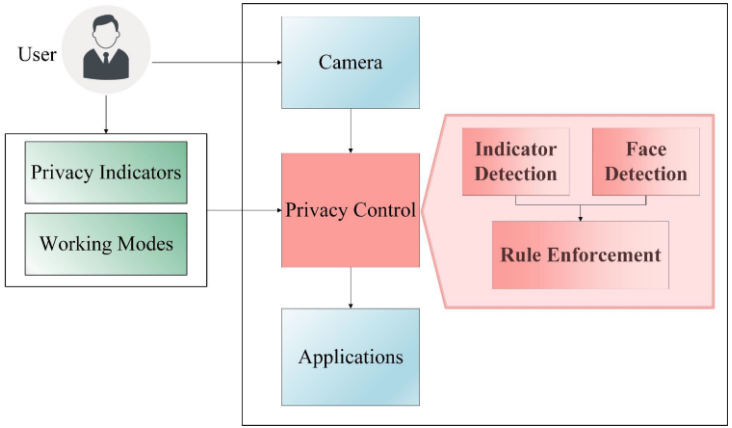

Figure 3. Privacy control framework.

System Overview

Control operations will be performed according to detected visual indicators and control rules set.

Rules can be extended if there are multi-ple tags. More working modes such as blurring body can be applied accordingly.

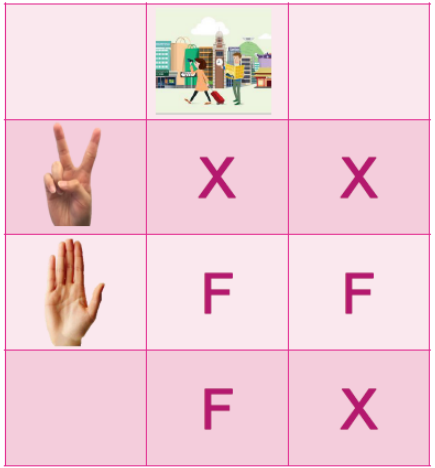

Figure 4. Privacy control rules.

Demonstration

Case 1: People’s faces will be blurred if tags are detected.

Figure 5. Different tags are used.

Demonstration

Case 2: Gestures can be used alone or to override tag-represented privacy preferences.

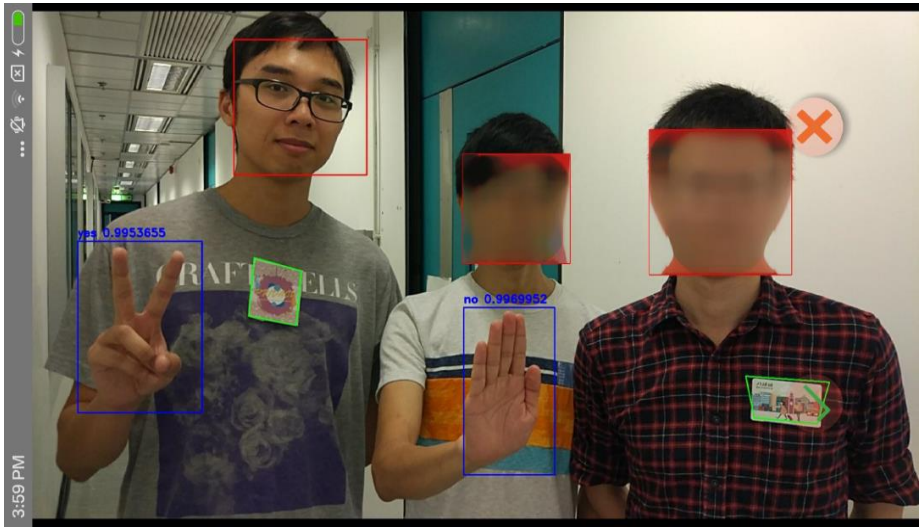

Figure 6. “Yes” and “no” gestures are used.