PriView
Exploring Visualisations to Support Users' Privacy Awareness

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Abstract

- *PriView:* **AR-based visualisations** in a mobile application or a head-mounted display (HMD)
- *PriView* helps users in not only **locating**, but also **understanding sources of potential tracking**
- application **scenarios** & two **implementations**
- exploratory **user study** (N=24) with both versions

Sample Scenarios

unfamiliar 🏠 rental apartment	🏛 museum	🚆 train station
familiar 👫 a friend's place	☕ office kitchen	🪑 way to work
private	**semi-public**	**public**

Implementation Samples
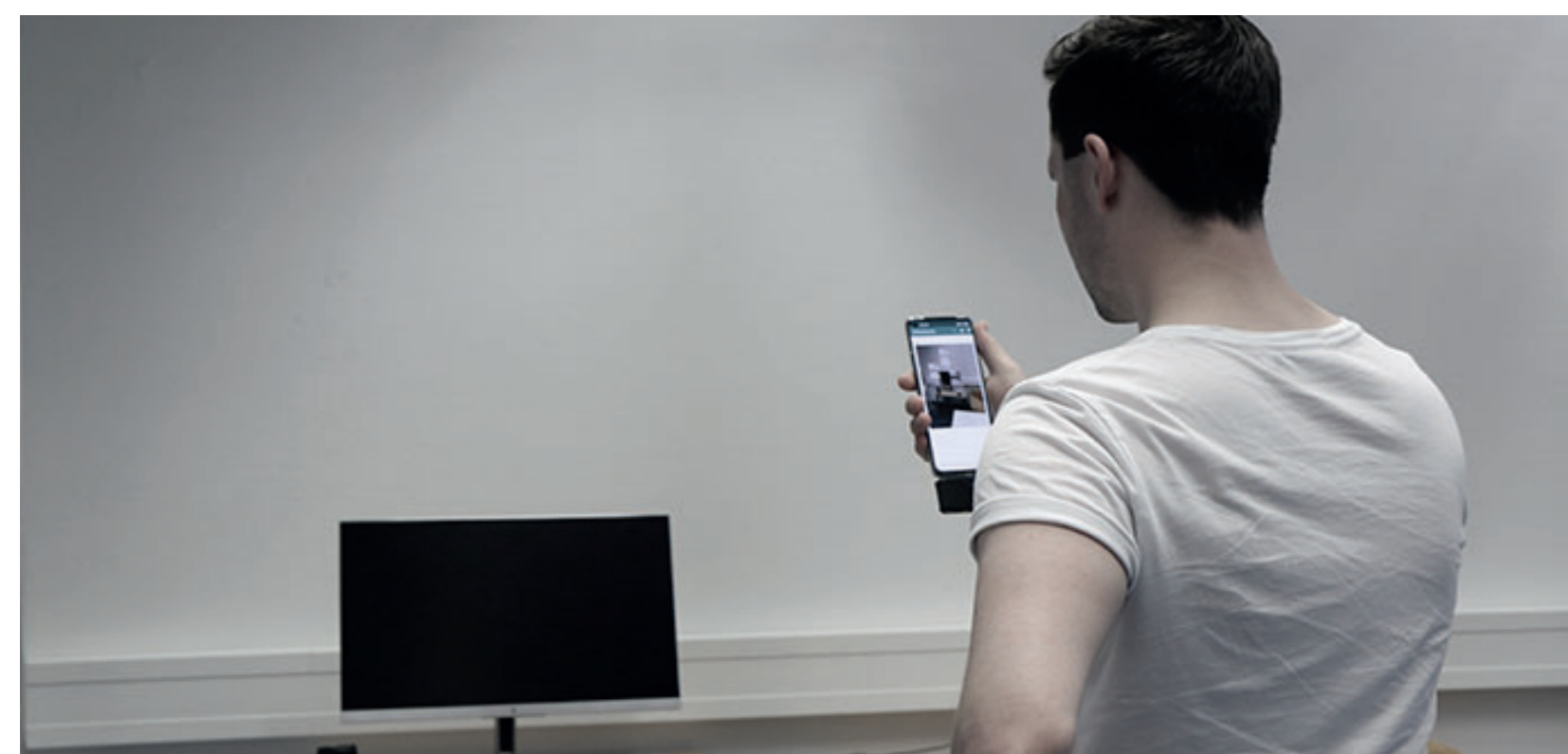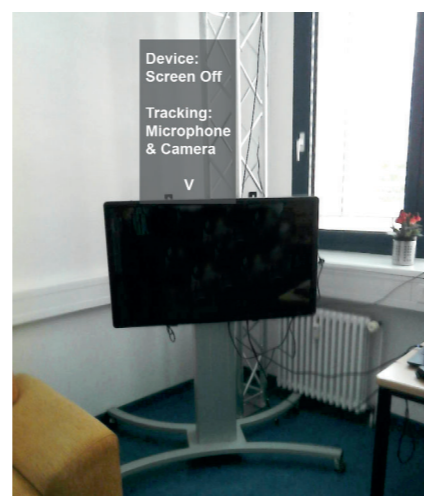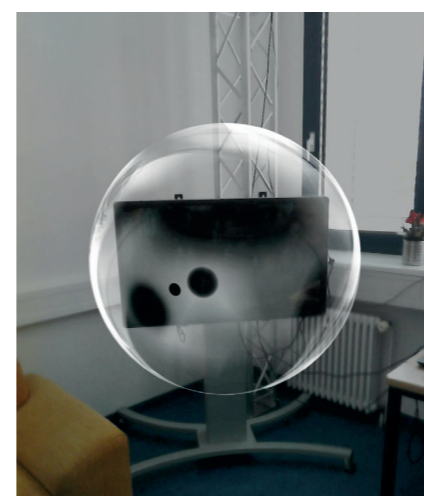

MOBILE APPLICATION 📱
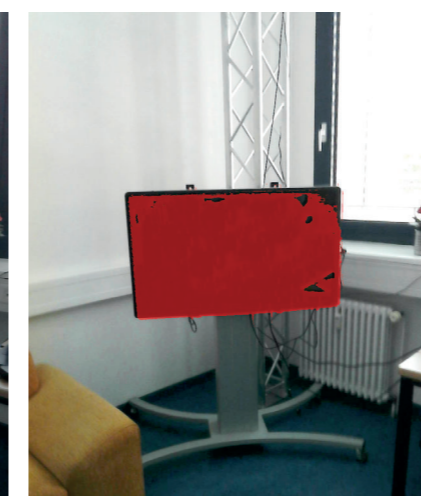
— VISUALISATIONS

Bounding Boxes | Text Labels | 3D Shapes | Segmentation | Sensor Icons
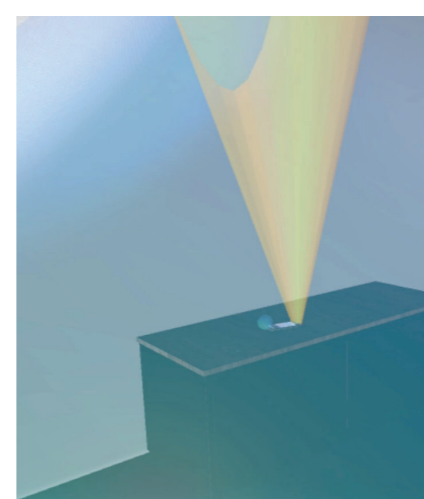

HEAD-MOUNTED DISPLAY 🥽
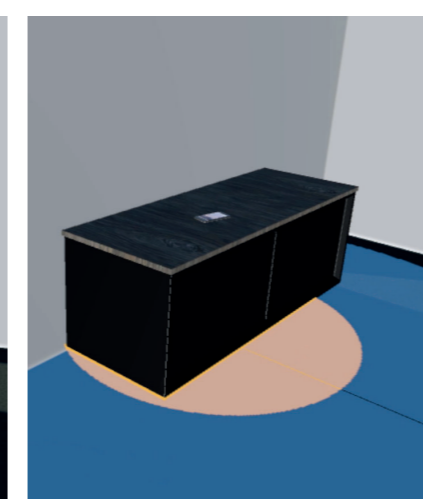
— VISUALISATIONS

Bounding Boxes | Text Labels | 3D Shapes | Warning Icon | Floor Markers

Results

- ✓ *PriView* can increase **privacy awareness in various use cases**
- ✓ balancing the right **amount of information** and visual overload is highly **context-dependent**
- ✓ *PriView* should provide mechanisms to **interact**, e.g.: permanent indicator with details on demand
- ✓ *PriView* needs to consider **multiple users' privacy needs**: protect own and others' privacy alike, provide mechanisms to opt-out

Outlook

Information Sources
- ? How can the respective information be collected to be visualised in *PriView*?
- ? How to choose the information that is relevant for users in the respective situation?

Adapting, Configuring, Contextualising
- ? How can *PriView* be adapted to users' needs automatically, e.g. based on context?
- ? Which options should be given to users to adapt *PriView* to their needs manually?

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RI CODE Research Institute Cyber Defence Bundeswehr University Munich

GUC German University in Cairo الجامعة الألمانية بالقاهرة

LMU LUDWIG-MAXIMILIANS-UNIVERSITÄT MÜNCHEN

Media Informatics Group