

# Context Specific Visualizations on Smartwatches

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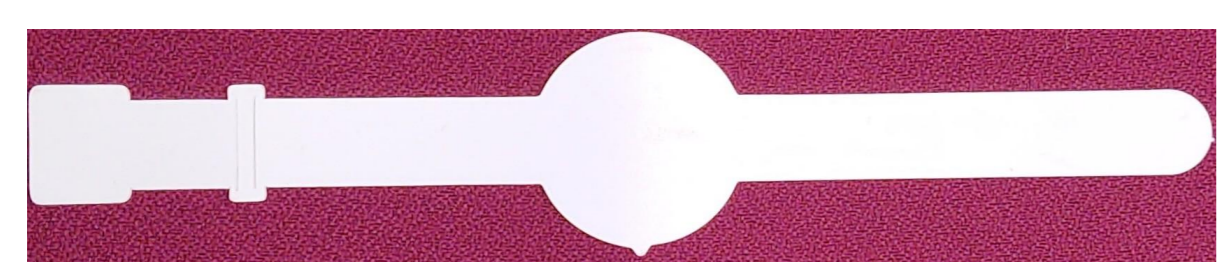
## What?

Untapped opportunities for smartwatch visualization during sightseeing...

- In which situations can visualizations be useful?
- What information needs should they target?
- How could data be represented?

## How?

We conducted an ideation activity in a sightseeing context [1].



A physical paper prop in the shape of a smartwatch



Participants...

- explored the city of Stuttgart, Germany,
- stopped at each sight after 30 minutes,
- evaluated contextual information needs in the current situation,
- sketched a visualization on a prop, and
- pairs of team members discussed their ideas and added comments, adjustments, or variations to their notes and sketches.

## Findings

Specific information needs on smartwatches...

34 sketches



Entertainment (7x), Shopping (6x), Activity tracking (5x), Tasks (5x), Restaurant (4x), Navigation (4x), Elevator riding (2x), and Weather (1x)



Memory keeping



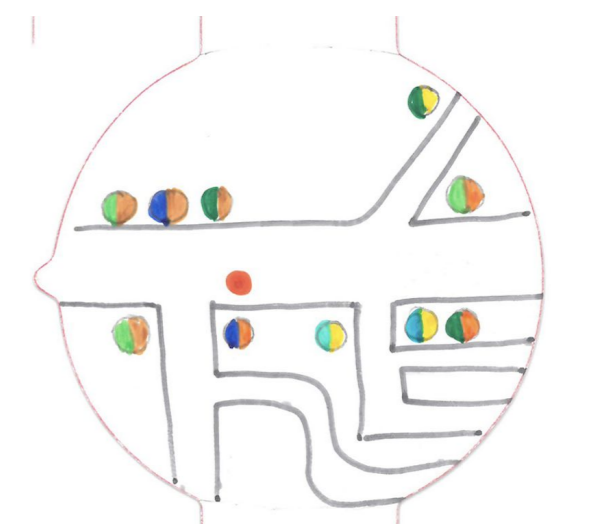
Market crowd



Activity map



Appointment task



Restaurant search

## We found...

Frequent data representation with...

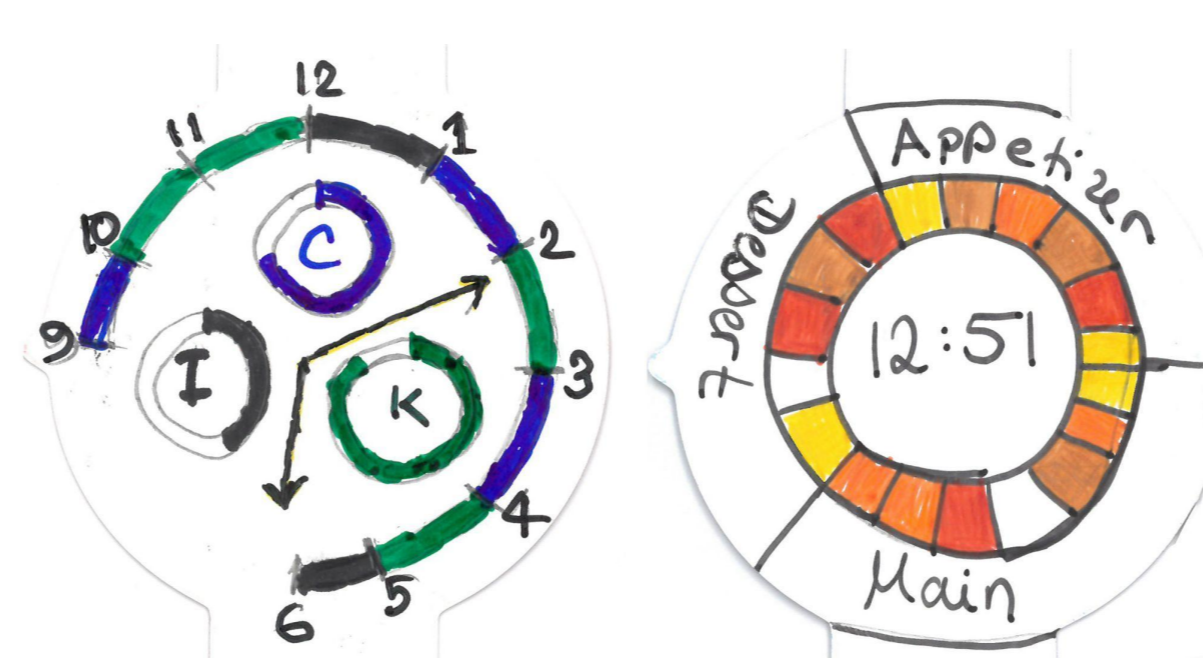


Charts (10x)

Icons (9x)

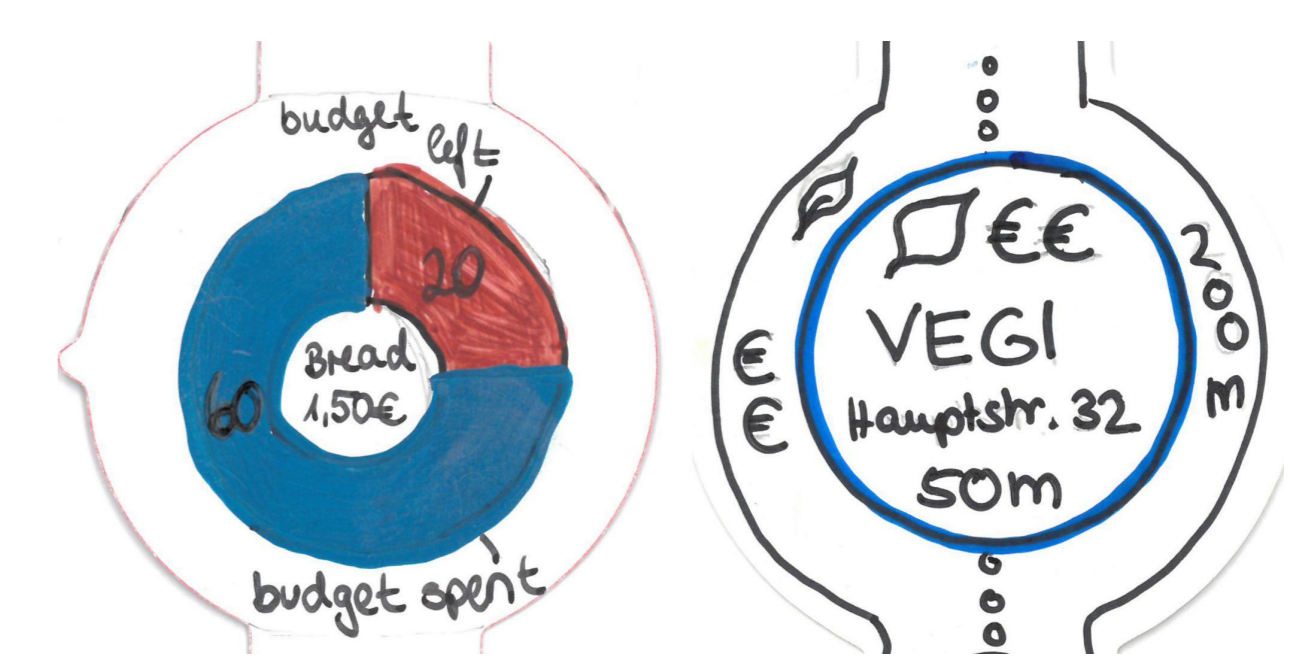
Text (6x)

18 Watch face designs



Watch faces that show time

16 Application designs



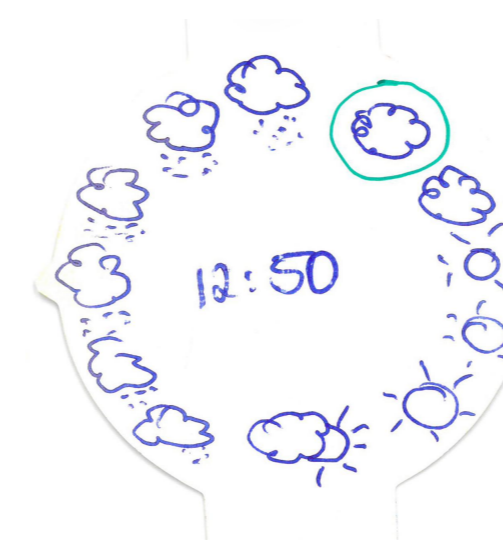
Application designs that do not show time

## Future work on smartwatch visualization...

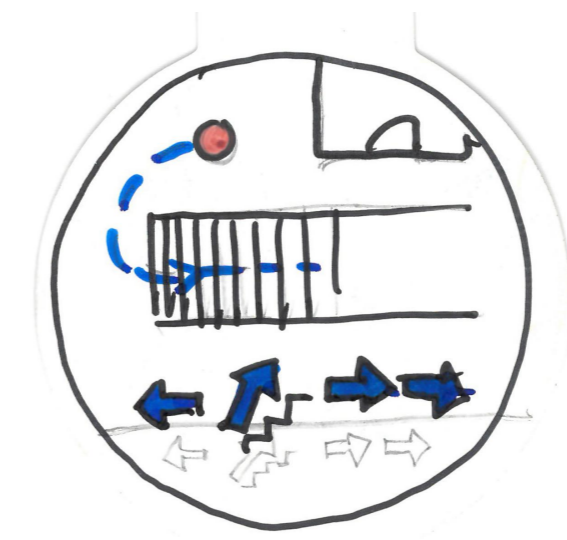
- Going beyond the watch display (e.g., vis on watch strap)
- Feasibility and usability of watch straps as data displays
- Effective use of icons for context specific visualization



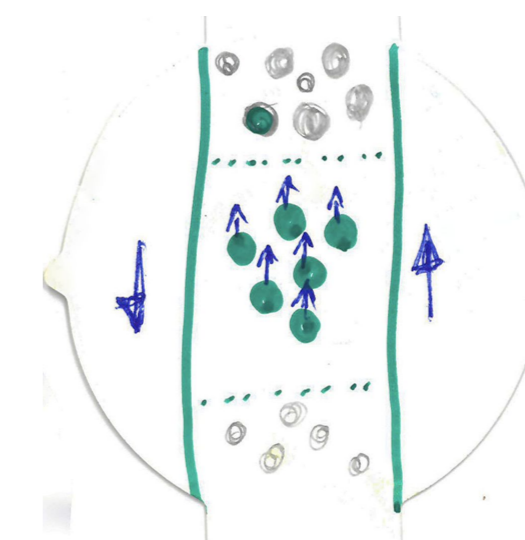
Map visualization on the watch strap



Weather forecast



Site guidance



Elevator riding

[1] Sheelagh Carpendale, Petra Isenberg, Charles Perin, Tanja Blascheck, Foroozan Daneshzand, Alaul Islam, Katherine Currier, Peter Buk, Victor Cheung, Lien Quach, Laton Vermette (2021). Mobile Visualization Design: An Ideation Method to Try. In Mobile Data Visualization, pp. 241-261. doi:10.1201/9781003090823-8

