Consumer Interaction in Store

Context

COOP stores offer thousands of products to their customers in physical stores

Information such as expiry date, nutritional content and packaging date is required by law and is presented textually in print (i.e. packaging) and relies on barcodes

The proliferation of mobile devices and advances in the domain of augmented reality (AR) creates new opportunities for presenting product information.

Problem

Issue at stake

Storytelling is increasingly becoming a competitive advantage for retails sales *(Gilliam and Zablah, 2013)*

Presenting products in a “one size fits all” is not sufficient *(McKinsey whitepaper, 2013)*

What does stakeholder want to achieve?

The consumer’s shopping experience should not be limited to the print medium

What is the academic problem?

This exploratory research project should provide tangible evidence for the feasibility of providing an AR consumer experience run from a mobile browser

Problem (cont’d)

The Problem: What is the problem you are trying to solve
Define very clearly. Explain why it is important.
Novelty: Why has previous research not solved this problem? What are its shortcomings?
Describe/cite all relevant works you know of and describe why these works are inadequate to solve the problem. This will be your literature survey.
Idea: What is your initial idea/insight? What new solution are you proposing to the problem? Why does it make sense? How does/could it solve the problem better?
Hypothesis: What is the main hypothesis you will test?
Methodology: How will you test the hypothesis/ideas? Describe what simulator, model or you will use and what initial experiments you will do.

Academic context

https://hackernoon.com/can-augmented-reality-solve-mobile-visualization-f06c008f8f84

Operating under the assumption that the user experience should be loaded after xxx ms… Considering a baseline visualization of a square, sphere and cylinder… Using the default Hiro marker instead of introducing variability using a new marker…	How long is spent downloading bundle? How long is spent initializing library? How long is spent finding marker? How long is spent rendering model? When is the experience “ready”?
What is the effect of angle? What is the effect of lighting conditions? Is the marker finding faster if you use a multi-marker setup?	Tweak AR.js and test marker finding capabilities (https://tweedegolf.nl/2016/05/24/AR-and-the-web/) Computer vision in the browser (https://www.slideshare.net/robman/ismar17-augmenting-mixing-extending-reality-on-the-web?next_slideshow=1) W3C AR group - https://www.w3.org/community/ar/

Consumer interaction

Technologies

- Mobile browsers (IOS and Android) as user portal
- Augmented reality Javascript library **(TBD)** - AR.js, Awe.js, Aframe.js
- Firebase for static hosting and data persistence
- Software for 3D renders **(TBD)**

Workplan

- *17-10-2017* - Hand-in of project proposal
- *24-10-2017* - Settle on technology choices
- *31-10-2017* - Build protoype with 3 different products/projections
- *07-11-2017* - Test project in real context (i.e. COOP store)
- *14-11-2017* - Prepare virtual demo for presentation
- *21-11-2017* - TBD
- *28-11-2017* - TBD
- *05-12-2017* - Presentation day

Notes

- IBM’s Augmented Reality Shopping Assistant presented on CeBIT 2013
- McKinsey whitepaper
- Aframe.io