



Stichting NIOC en de NIOC kennisbank

Stichting NIOC (www.nioc.nl) stelt zich conform zijn statuten tot doel: het realiseren van congressen over informatica onderwijs en voorts al hetgeen met een en ander rechtstreeks of zijdelings verband houdt of daartoe bevorderlijk kan zijn, alles in de ruimste zin des woords.

De stichting NIOC neemt de archivering van de resultaten van de congressen voor zijn rekening. De website www.nioc.nl ontsluit onder "Eerdere congressen" de gearchiveerde websites van eerdere congressen. De vele afzonderlijke congresbijdragen zijn opgenomen in een kennisbank die via dezelfde website onder "NIOC kennisbank" ontsloten wordt.

Op dit moment bevat de NIOC kennisbank alle bijdragen, incl. die van het laatste congres (NIOC2025, gehouden op donderdag 27 maart 2025 jl. en georganiseerd door Hogeschool Windesheim). Bij elkaar zo'n 1500 bijdragen!

We roepen je op, na het lezen van het document dat door jou is gedownload, de auteur(s) feedback te geven. Dit kan door je te registreren als gebruiker van de NIOC kennisbank. Na registratie krijg je bericht hoe in te loggen op de NIOC kennisbank.

Het eerstvolgende NIOC vindt plaats op 18 maart 2027 in Arnhem en wordt georganiseerd door HAN University of Applied Sciences.

Reacties over de NIOC kennisbank en de inhoud daarvan kun je richten aan de beheerder:

R. Smedinga kennisbank@nioc.nl.

Vermeld bij reacties jouw naam en telefoonnummer voor nader contact.

Augmented reality

Adrie van der Padt
Computer Science

Glenn Mosdall
IDT/Java

Glenn Mosdall

- **Rotterdam University**

- **Education:** Computer Science
- **Minor :** Embedded Systems

- **Logica**

- **Program:** Working Tomorrow
- **Division:** Industry, Distribution and Transport
- **Competence:** Java



Inhoud

1 Introduction

2 Reasoning

3 Assignment

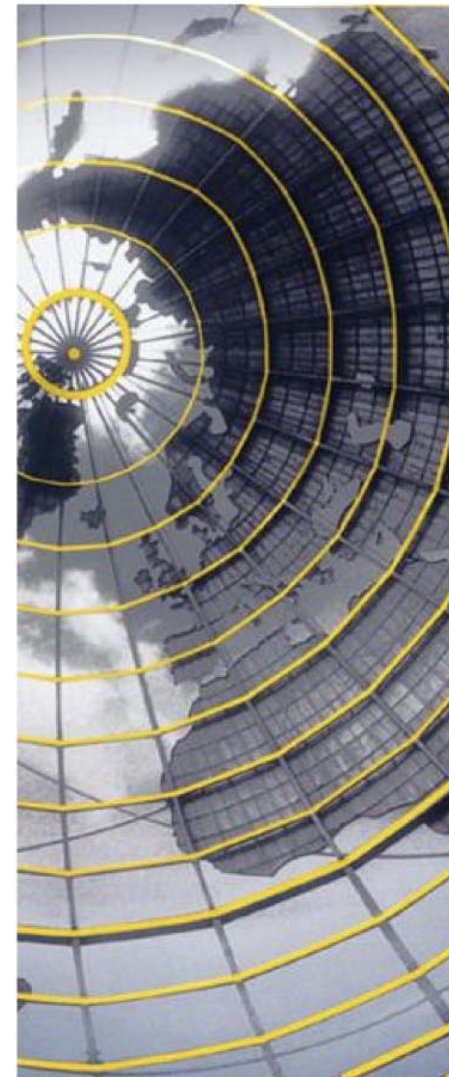
4 Research

5 Prototype

6 Usability test

7 Conclusion

? Demo & Questions



Introduction



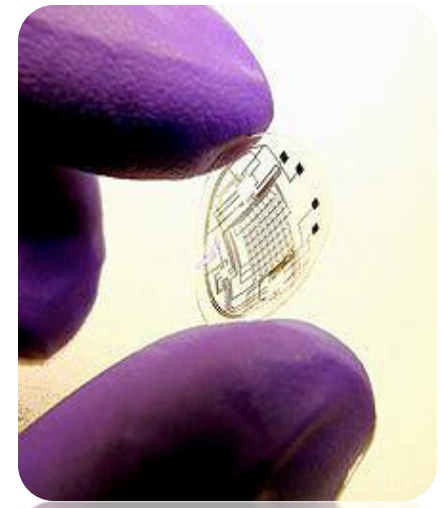
15.000 v.Chr.



1962



1966



Toekomst

Reasoning

MultimediaN

Walking assistant
for elderly



Intelligent table



Assisting people
with emotions



Assisting the
traveller



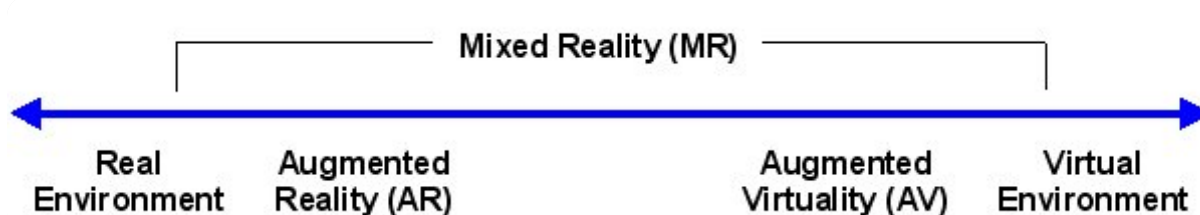
Assignment

“What information can be provided for interesting objects by augmented reality to enrich the experience of tourists?”



Research: what is augmented reality?

“An augmented reality system generates a composite view for the user. It is a combination of the real scene viewed by the user and a virtual scene generated by the computer that augments the scene with additional information.”



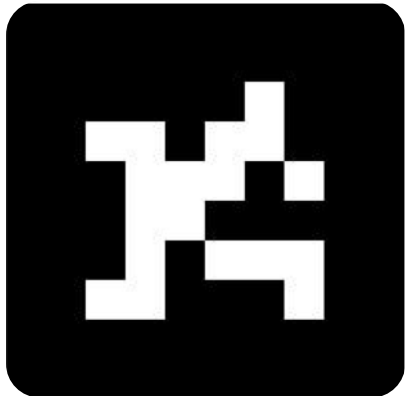
Research: what is augmented reality?



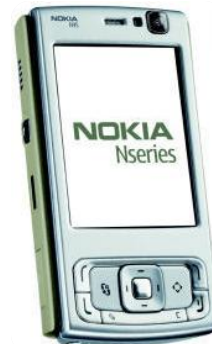
Research: visualisation



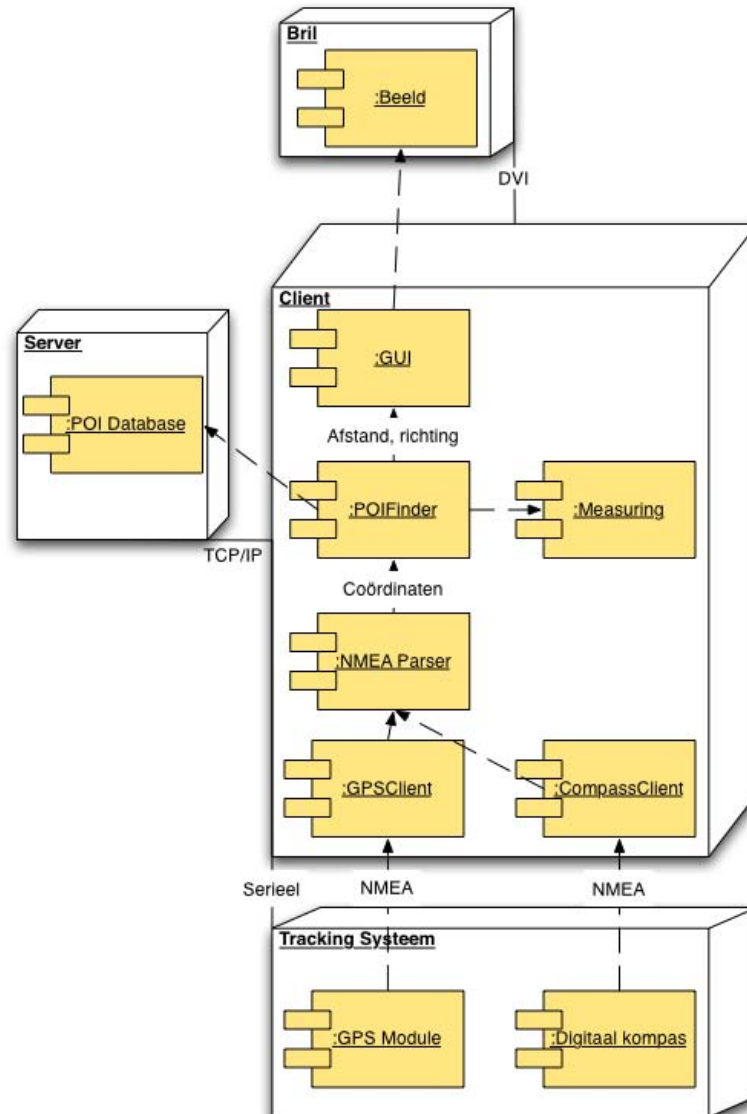
Research: tracking system



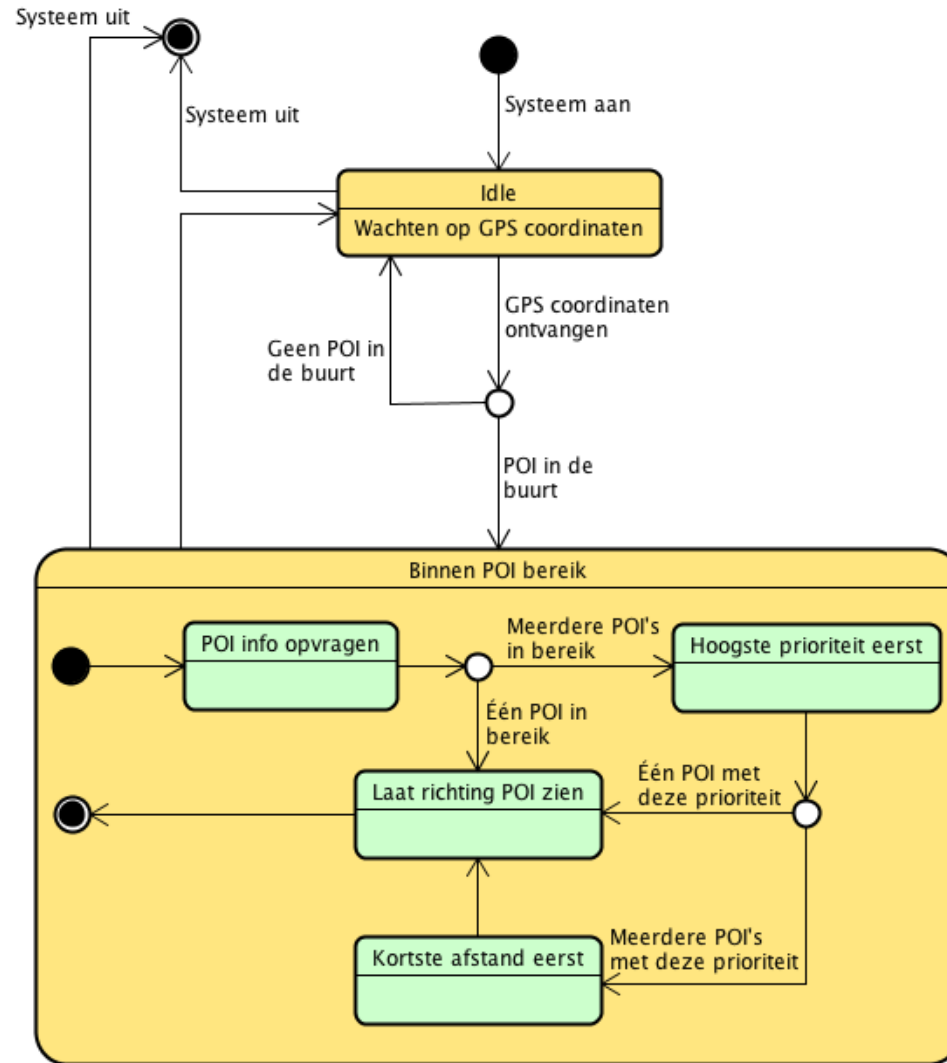
Research: programmable computer



Prototype: Component diagram



Prototype: State-chart diagram



Prototype: Summary



Bluetooth



DVI



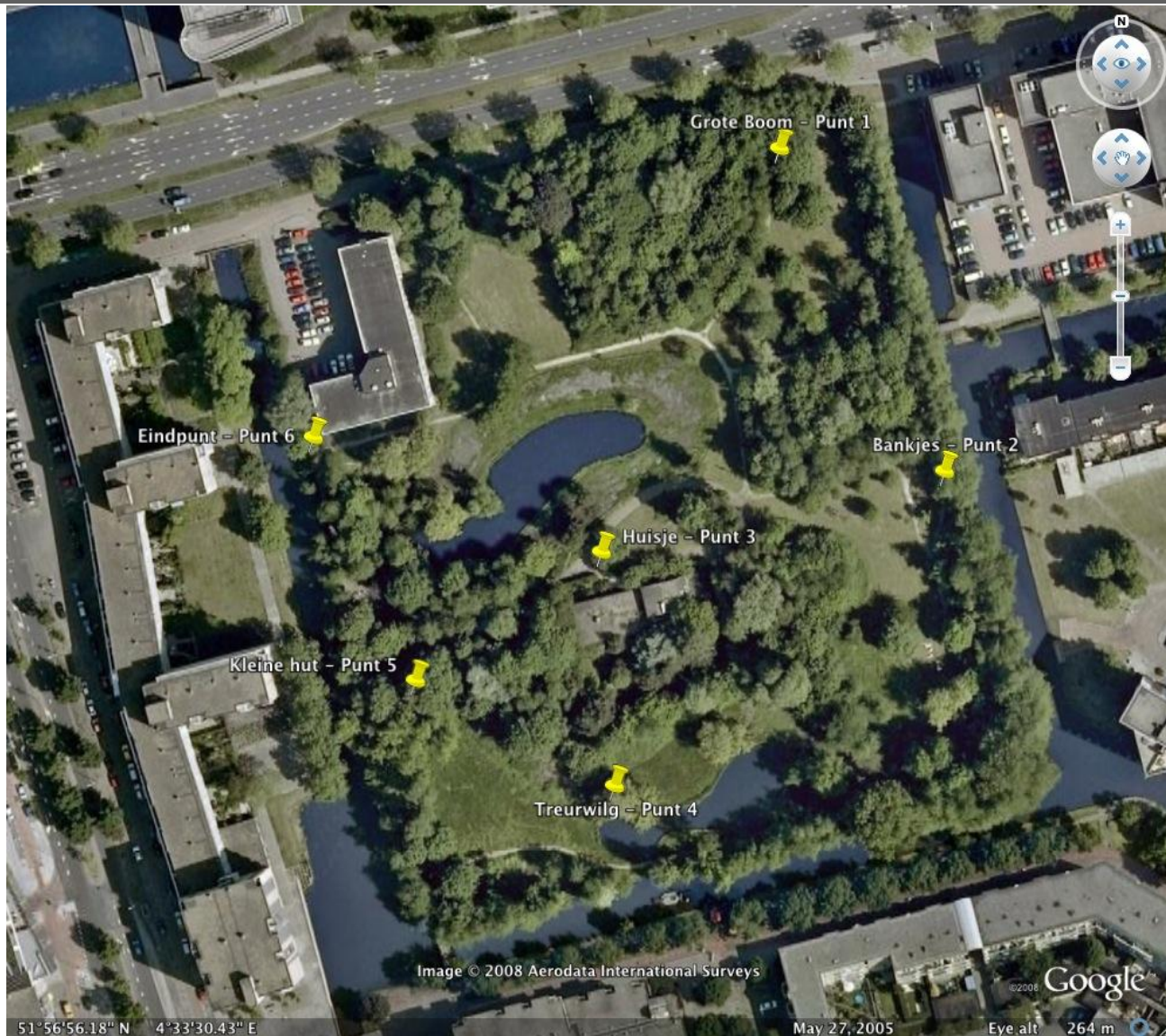
Prototype: in use



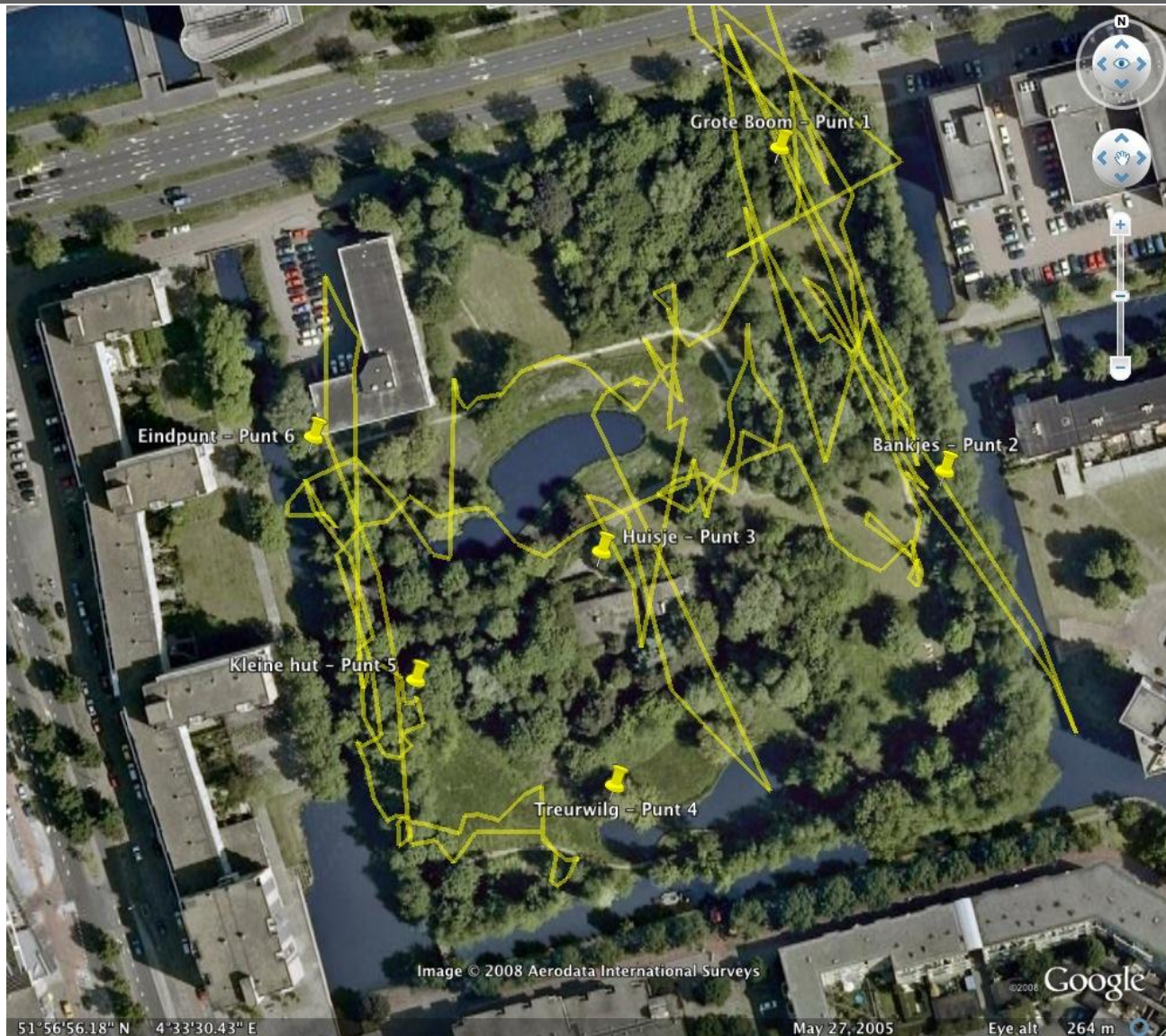
Prototype: operation



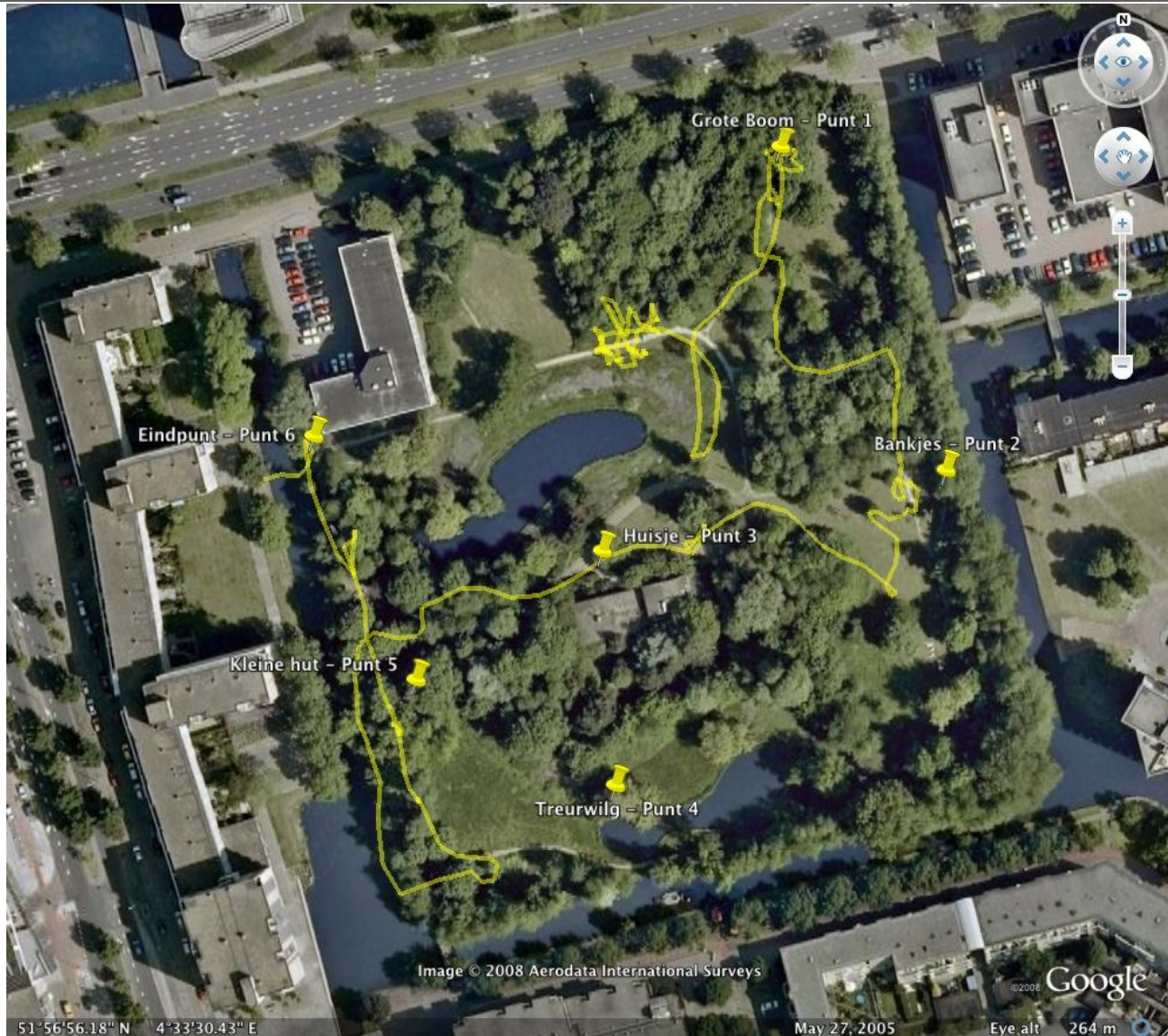
Usability test: planning



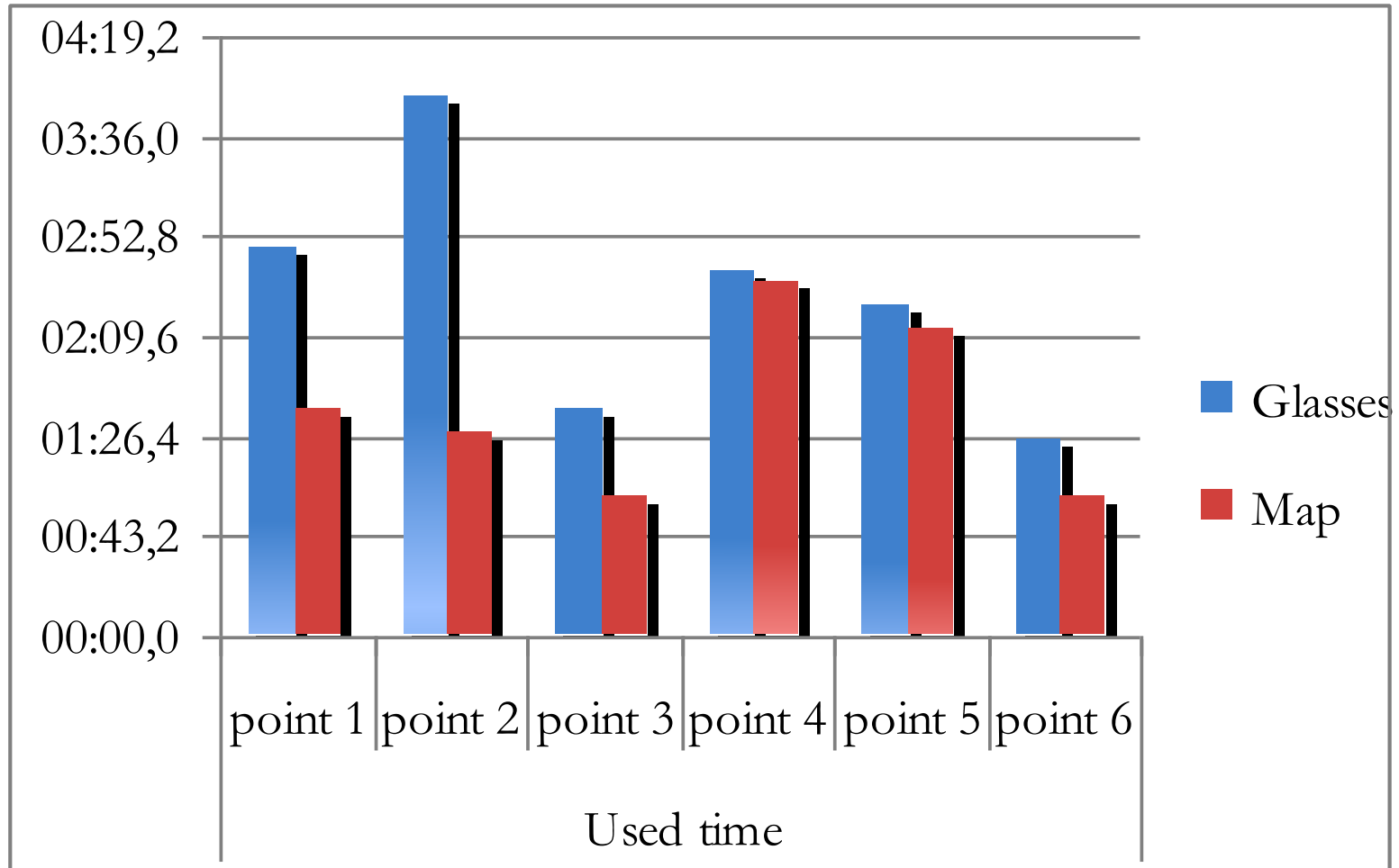
Usability test: walking routes



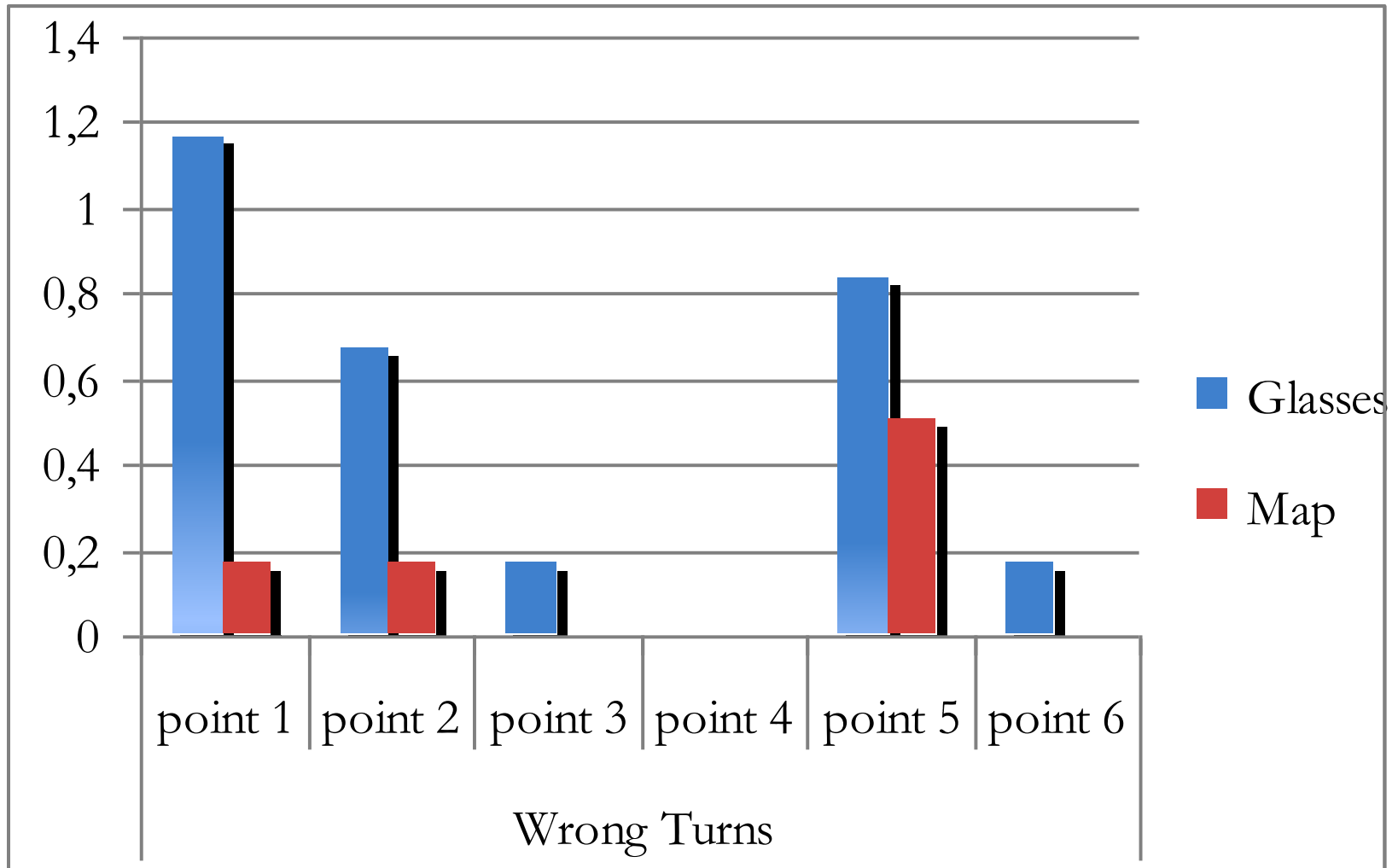
Usability test: walking routes



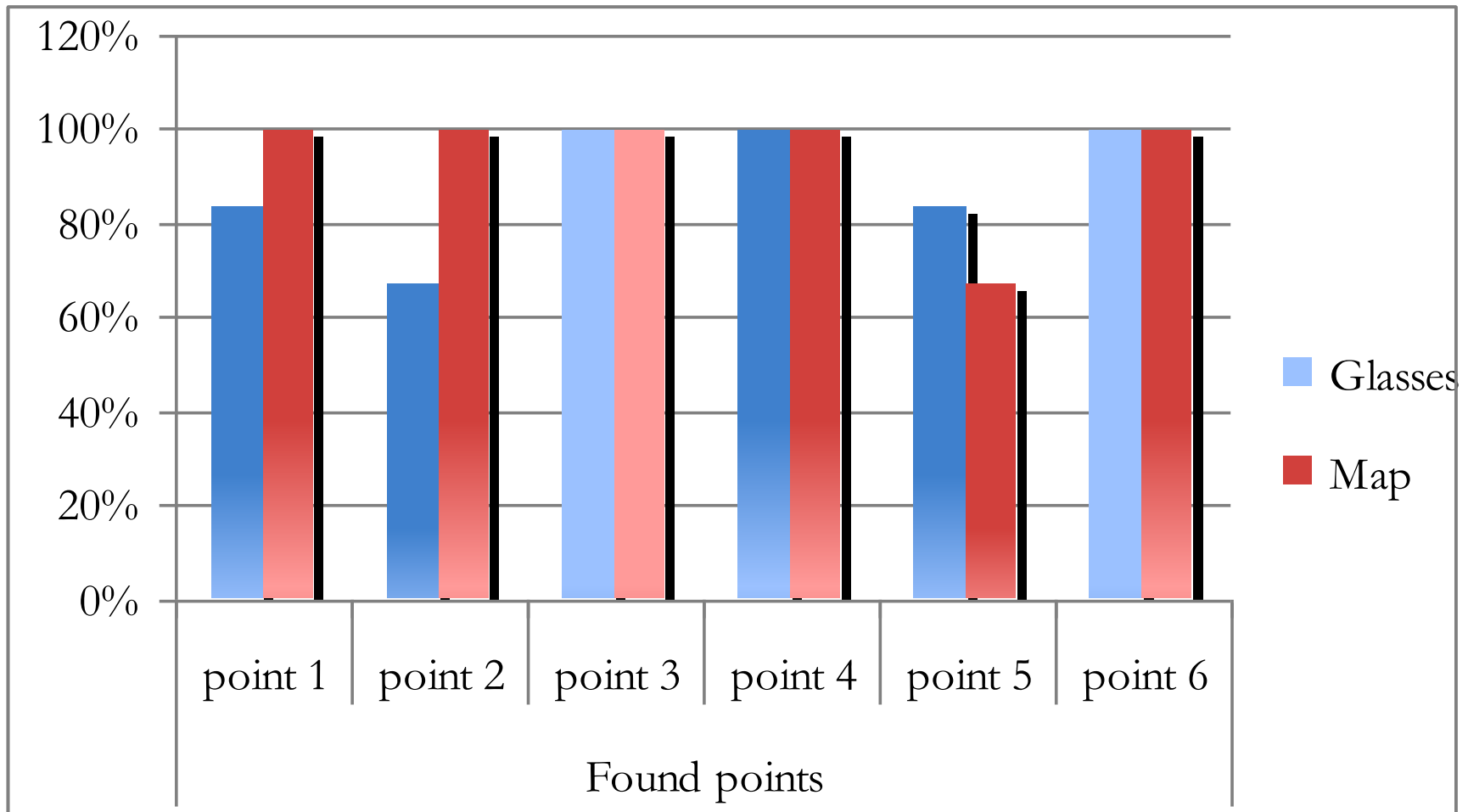
Usability test: observations



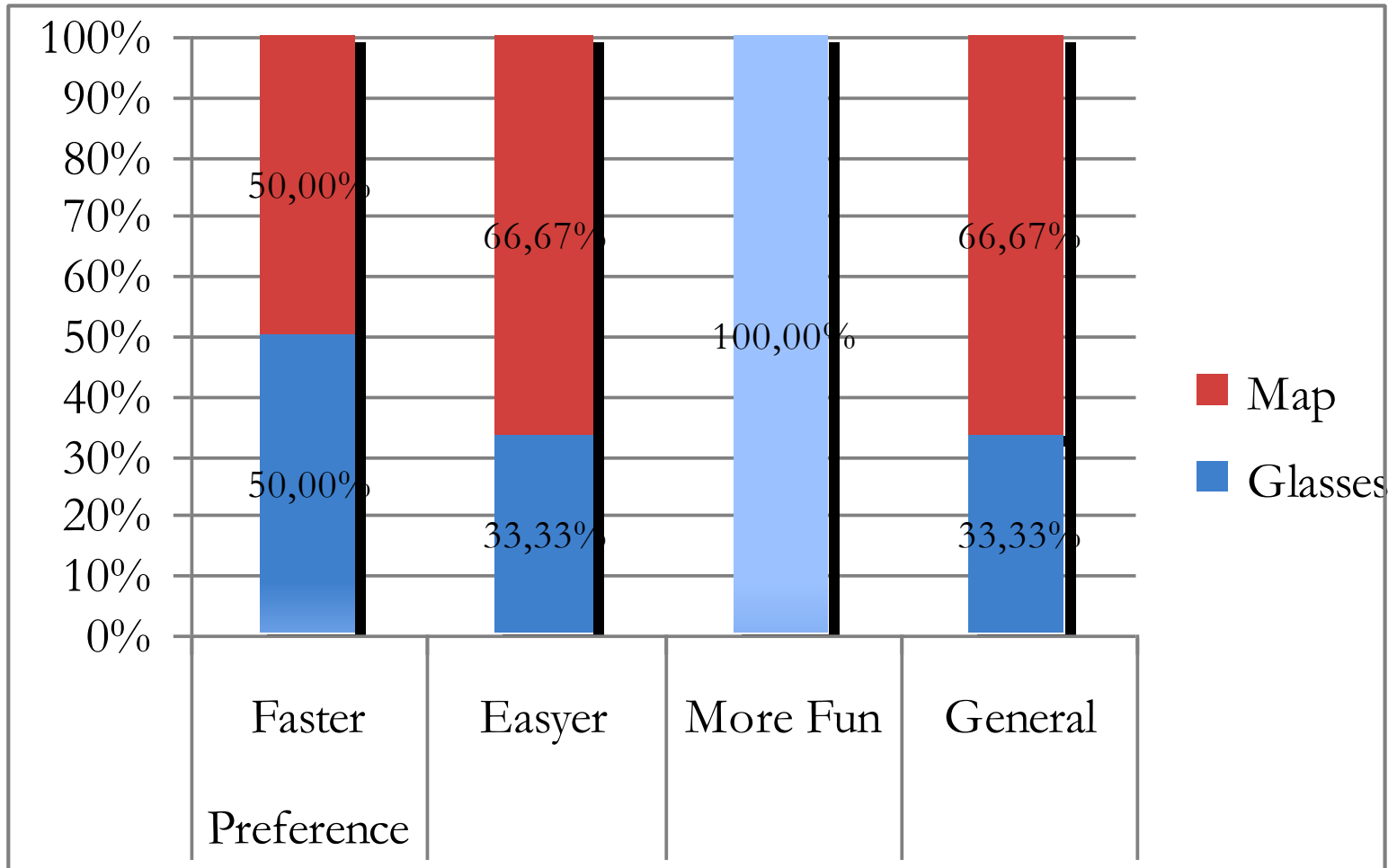
Usability test: observations



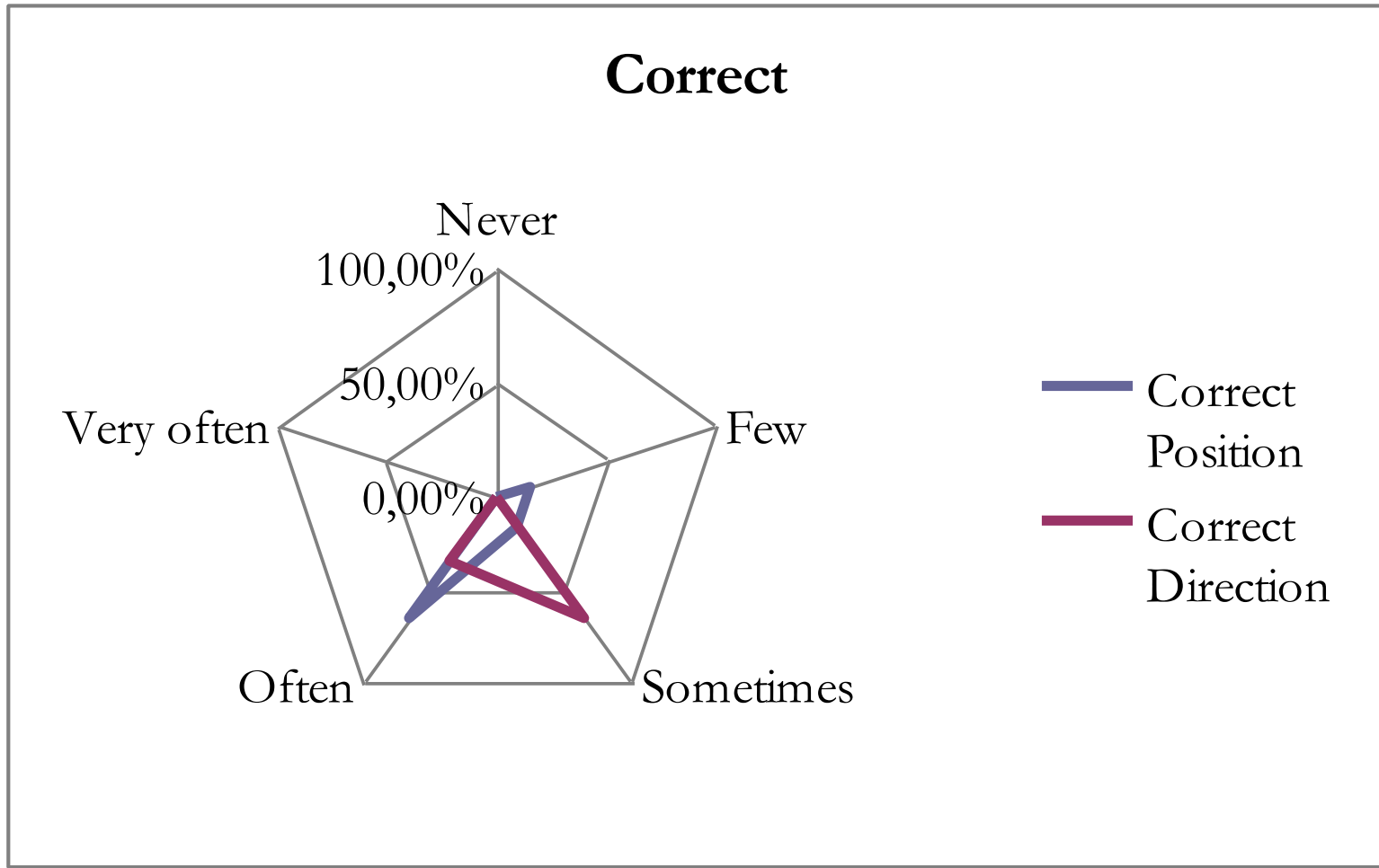
Usability test: observations



Usability test: evaluation

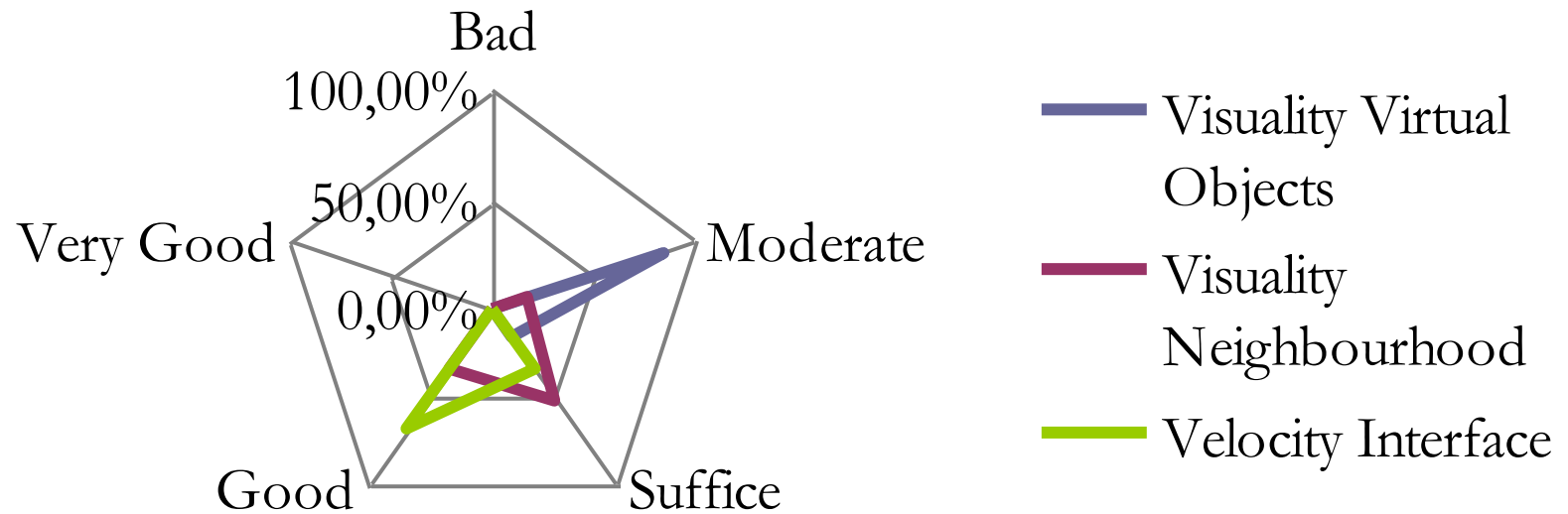


Usability test: evaluation

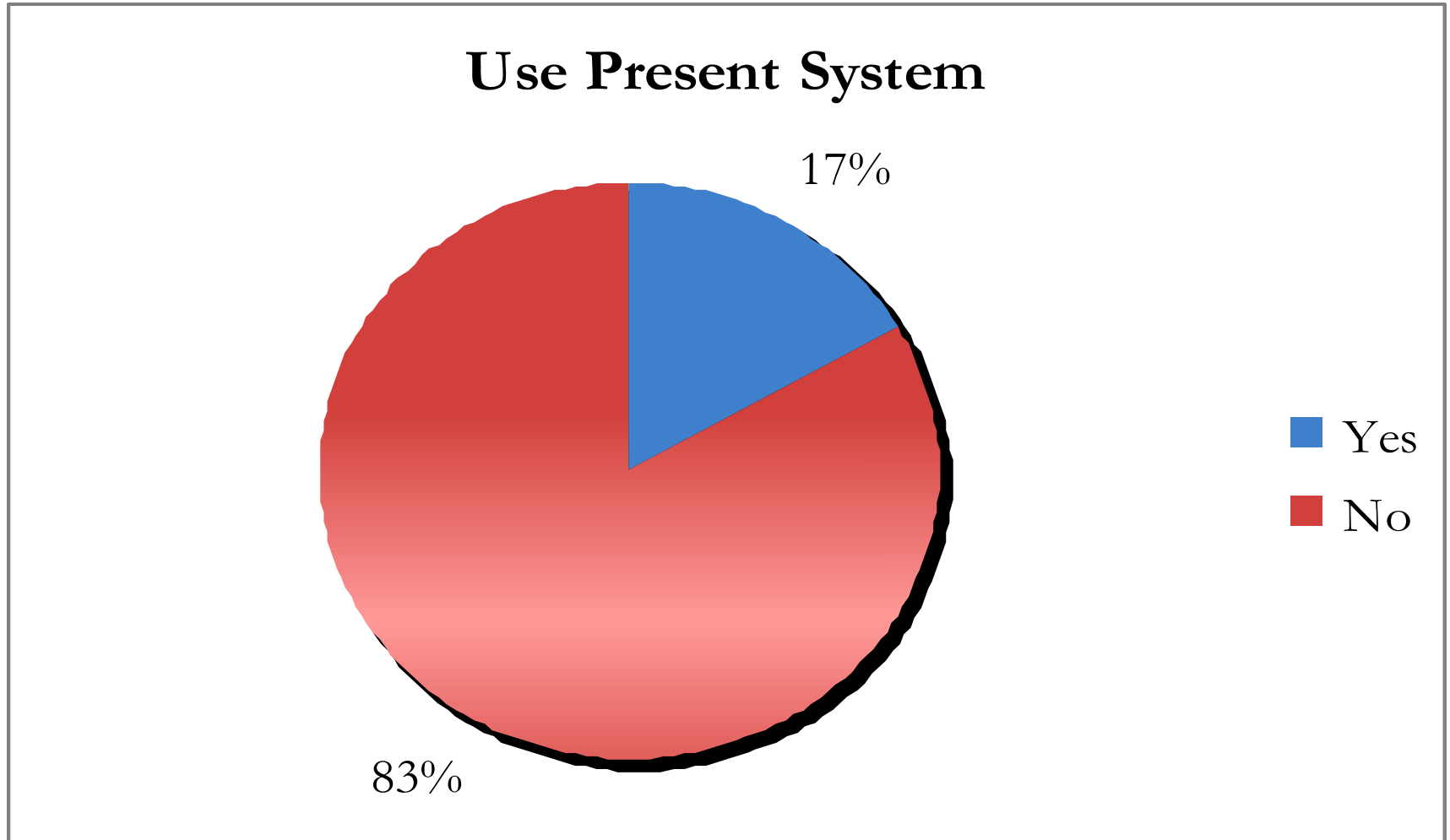


Usability test: evaluation

Performance

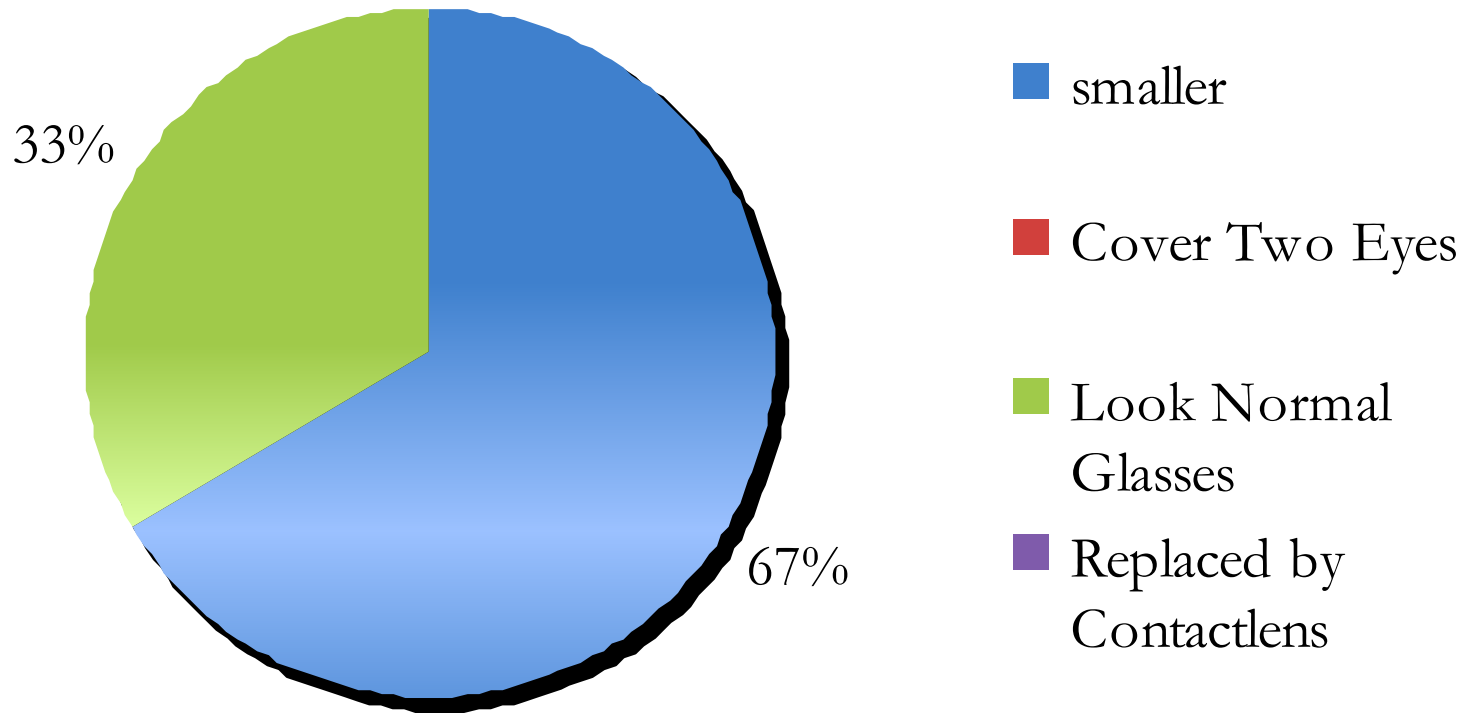


Usability test: evaluation



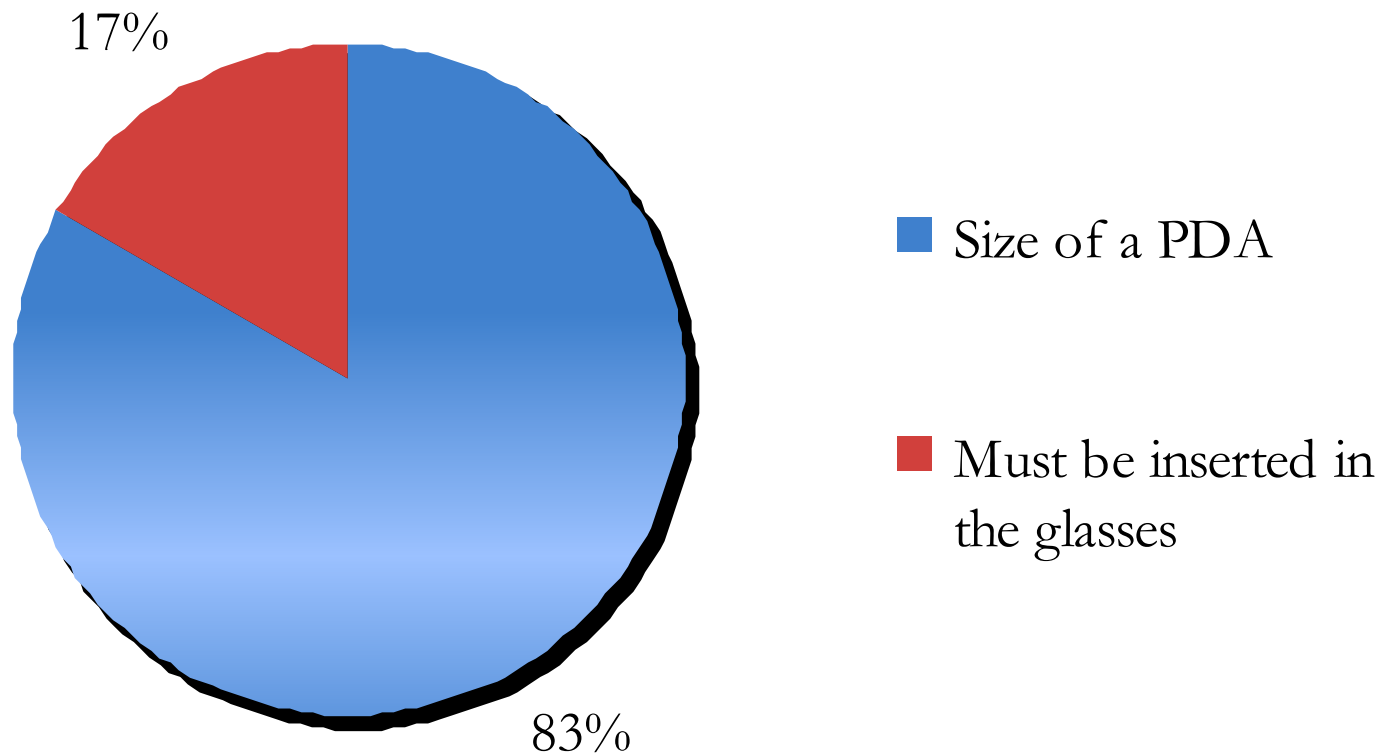
Usability test: evaluation

The Glasses Must ...



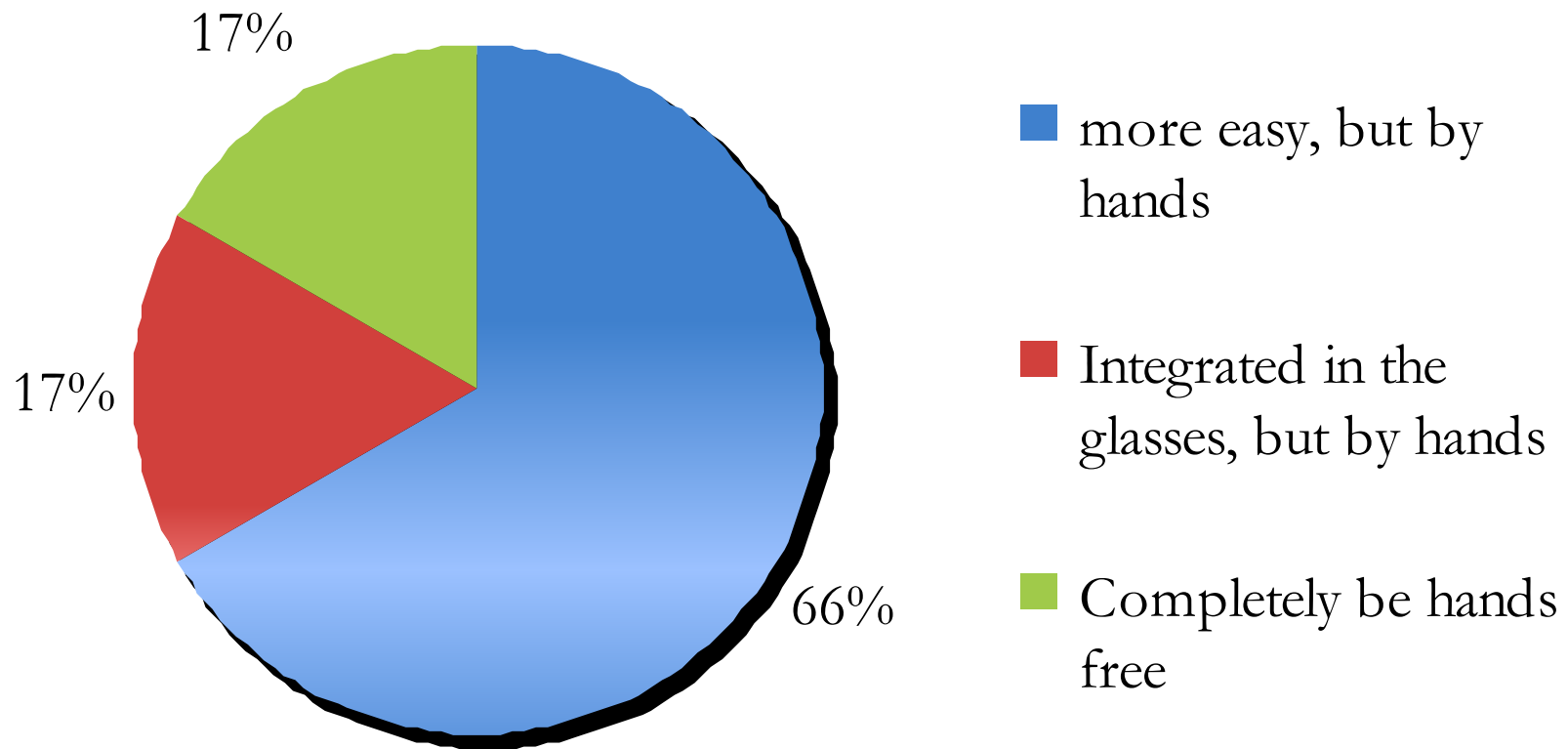
Usability test: evaluation

The laptop in the bag must...

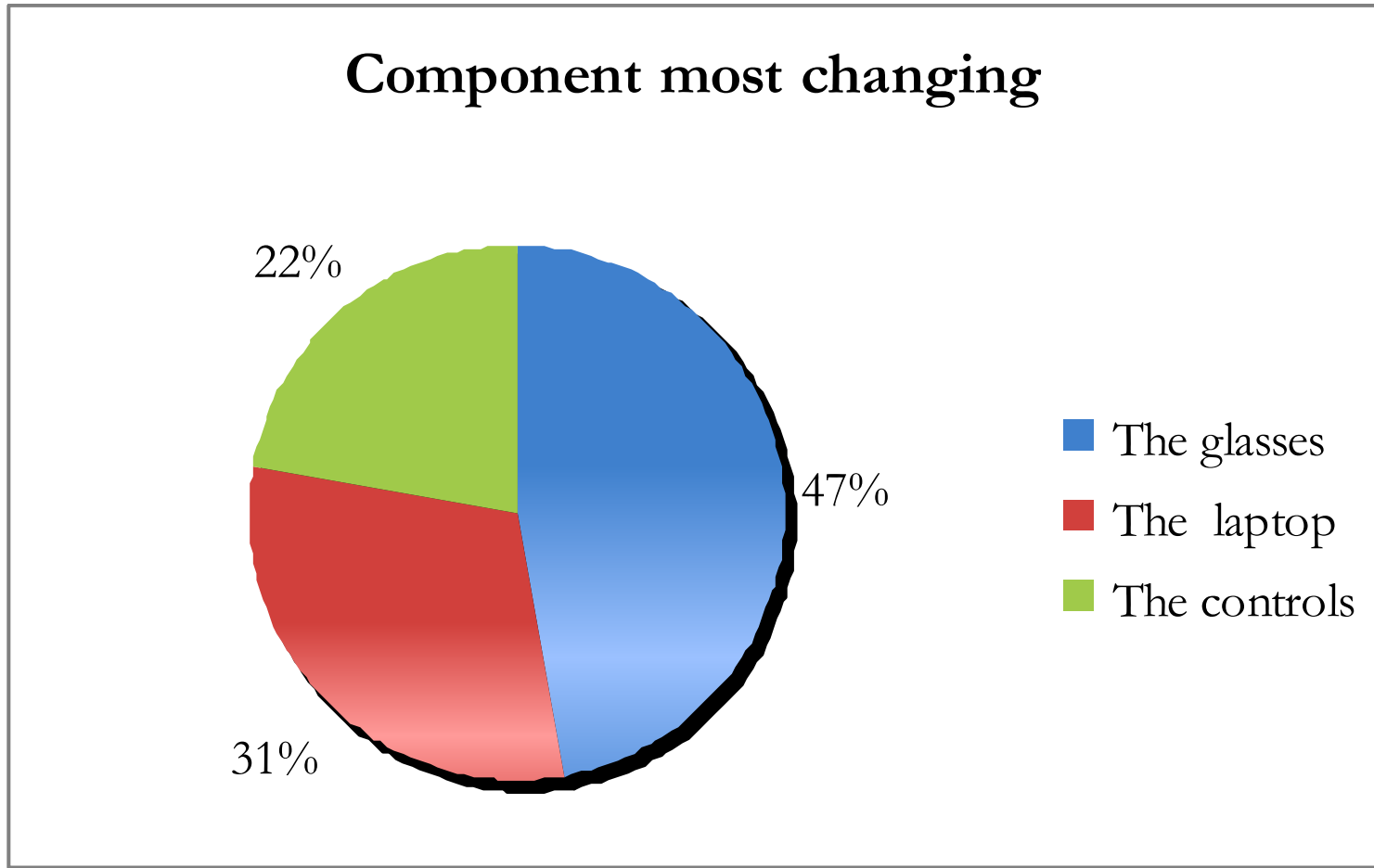


Usability test: evaluation

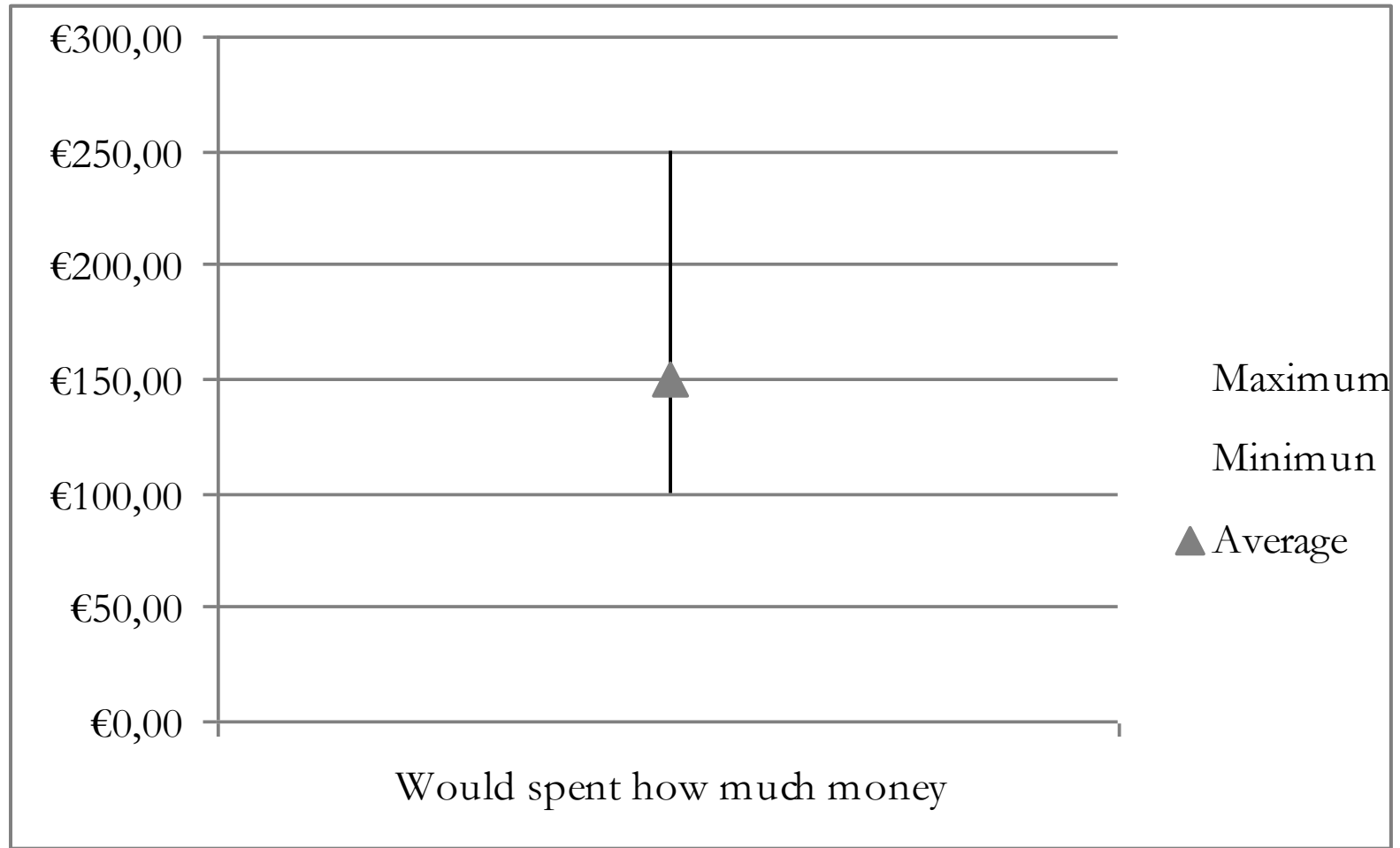
The controls must ...



Usability test: evaluation



Usability test: evaluation



Conclusion

- Project is succesful!
 - Business innovation is satisfied about the product.
- Navigation with augmented reality has the future
 - Target group is interested
 - Some adaptation is necessary
- Applications
 - Improvement used technology is necessary
 - There is a lot of possible applications

Demo & Questions

