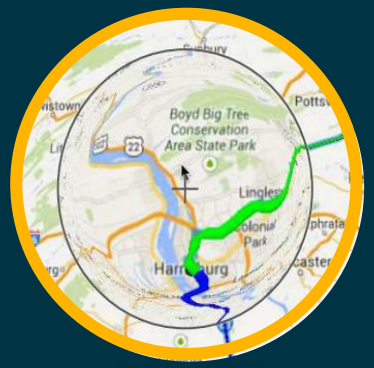
REIMAGINING (MAP) NAVIGATION

Daniel Meusburger

Fundamentals Situated Interaction

30 September 2016

3 RELATED TOPICS

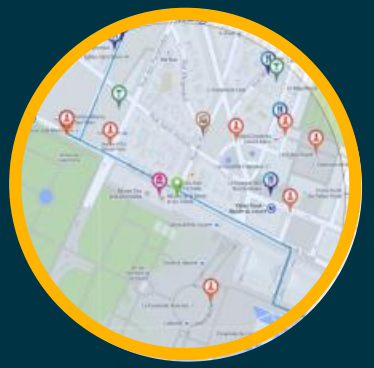


ROUTELENS

“I WANT TO EXPLORE A ROUTE”

JELLYLENS

“I WANT TO SEE THE IMPORTANT STUFF”



AURIGO

“I WANT TO DO A TOUR”

AGENDA

EASY ROUTE FOLLOWING FOR MAP APPLICATIONS

ROUTELENS

“I WANT TO EXPLORE A ROUTE”

Jessalyn Alvina
Caroline Appert
Olivier Chapuis
Emmanuel Pietriga

PAN AND ZOOM **POINTS OF INTEREST**

OVERVIEW + DETAIL **FOCUS + CONTEXT**

CONCEPT 1

EASY ROUTE FOLLOWING FOR
MAP APPLICATIONS

ROUTELENS

“I WANT TO EXPLORE A ROUTE”

Jessalyn Alvina
Caroline Appert
Olivier Chapuis
Emmanuel Pietriga

STANDARD FISHEYE LENS

WITH ROUTELENS

CONCEPT 1

RouteLens

Easy Route Following for Map Applications

Jessalyn Alvina

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EASY ROUTE FOLLOWING FOR MAP APPLICATIONS

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INSTRUMENT

YES, THE LENS.

CO-ADAPTIVE

NO USER APPROPRIATION OF THE LENS PARAMETERS E.G. SIZE, FORCE (ONLY POSITION).

LEARNABILITY HIGH, BECAUSE OF SIMILARITY TO PHYSICAL LENSES. SUBTLE FEEDBACK

CONCEPT 1

CONTEXT-AWARE
ADAPTIVE LENSES

JELLYLENS

“I WANT TO SEE THE IMPORTANT STUFF”

Cyprien Pindat
Emmanuel Pietriga
Olivier Chapuis
Claude Puech

CONCEPT 2

JellyLens

Content-Aware Adaptive Lenses

Cyprien Pindat Emmanuel Pietriga Olivier Chapuis Claude Puech

UIST 2012

CONTEXT-AWARE
ADAPTIVE LENSES

JELLYLENS

“I WANT TO SEE THE IMPORTANT STUFF”

Cyprien Pindat
Emmanuel Pietriga
Olivier Chapuis
Claude Puech

INSTRUMENT

YES, THE LENS.

CO-ADAPTIVE

NO USER APPROPRIATION OF THE LENS
(POINT OF INTERESTS ARE IN DATA)

SIMILARITY TO PHYSICAL MAGNIFYING LENS,
NO SEPARATE LEARNABILITY FEATURES

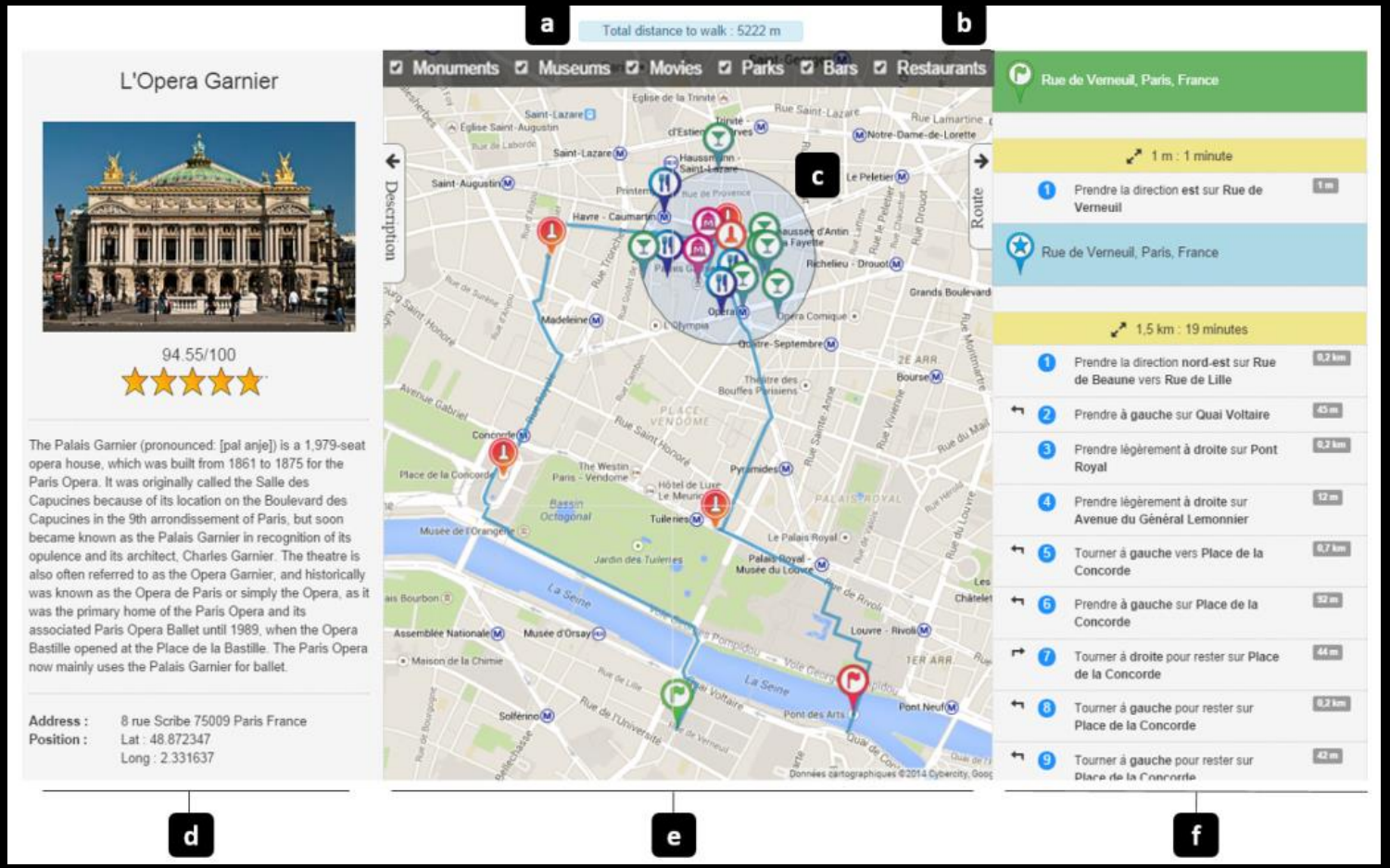
CONCEPT 2

AN INTERACTIVE TOUR PLANNER
FOR PERSONALIZED ITINERARIES

AURIGO

“I WANT TO DO A TOUR”

Alexandre Yahi
Antoine Chassang
Louis Raynaud
Hugo Duthil
Duen Horng (Polo) Chau



CONCEPT 3

Aurigo

Choose your itinerary

I want to build my own path

Starting address: Indiquez un lieu

Final address: Indiquez un lieu

Type of walk: **Light walk** **Regular walk** **Long walk**

Your interests

Monuments ★★½☆☆

Museums ★★½☆☆

Movies ★★½☆☆

Parks ★★½☆☆

Go

Reset

AN INTERACTIVE TOUR PLANNER
FOR PERSONALIZED ITINERARIES

AURIGO

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INSTRUMENT

? (FILTER, TYPE OF WALK)

CO-ADAPTIVE

NO APPROPRIATION OF THE TOOL ITSELF

NO GUIDANCE TO LEARN

CONCEPT 3

COMPARISON

Currently

	ROUTE LENS	JELLY LENS	AURIGO
REIFICATION	Magnification (object: the lens)	Magnification (object: the lens)	Route, reify path selection + finding POI
POLYMORPHISM	No, only map (routes)	Yes, different types (geometry, bitmaps, applications, websites)	-
REUSE	Use the same lens at different places	Use the same lens at different places	Save and share routes
SUBSTRATES	Set of rules of how mouse is attracted (adapted steering law)	Set of objects of interests which affect the behavior of the instrument	Map and social media data (Yelp+ Google Maps API)
INSTRUMENTS	Lens (fisheye)	Lens (adaptive fisheye)	-
APPROPRIATION	Only position	Only position	-
LEARNABILITY	Similar to physical magnifying glass (visual feedback)	Similar to physical magnifying glass , but unexpected behavior (visual)	Shows options in step-by-step mode

COMPARISON

Extension

	ROUTE LENS	JELLY LENS	AURIGO
REIFICATION	Ability to edit and save parameters of the lens	Ability to change lens parameters / draw lens	Ability to save and adapt custom filters and range
POLYMORPHISM	Other apps e.g. process charts Apply the motor effect to other lenses		
REUSE	Ability to add multiple lenses	Ability to add multiple lenses	Duplicate and edit routes*
SUBSTRATES			
INSTRUMENTS			Adapt + Copy “Pop-radius”
APPROPRIATION	Change lens parameter (size, magnification, attraction force)	Ability to change lens and map parameters (draw lens)	Create custom filters, draw routes yourself
LEARNABILITY			Show suggested routes (e.g. mobile)

COMPARISON

Currently
Extension

	ROUTE LENS	JELLY LENS	AURIGO
REIFICATION	Magnification (object: the lens) Ability to edit and save parameters of the lens	Magnification (object: the lens) Ability to change lens parameters / draw lens	Route, reify path selection + finding POI Ability to save and adapt custom filters and range
POLYMORPHISM	Only map (routes) Other apps e.g. process charts Apply the motor effect to other lenses	Yes, different types (geometry, bitmaps, applications, websites)	-
REUSE	Use the same lens at different places Ability to add multiple lenses	Use the same lens at different places Ability to add multiple lenses	Save and share routes Duplicate and edit routes*
SUBSTRATES	Set of rules of how mouse is attracted (adapted steering law)	Set of objects of interests which affect the behavior of the instrument	Map and social media data (Yelp+ Google Maps API)
INSTRUMENTS	Lens (fisheye)	Lens (adaptive fisheye)	- Adapt + Copy “Pop-radius”
APPROPRIATION	Only position Change lens parameter (size, magnification, attraction force)	Only position Ability to change lens and map parameters (draw lens)	- Create custom filters, draw routes yourself
LEARNABILITY	Similar to physical magnifying glass (visual feedback)	Similar to physical magnifying glass , but unexpected behavior (visual)	Shows options in step-by-step mode Show suggested routes (e.g. mobile)

REFERENCES

Jessalyn Alvina, Caroline Appert, Olivier Chapuis, and Emmanuel Pietriga. 2014. **RouteLens: easy route following for map applications**. In *Proceedings of the 2014 International Working Conference on Advanced Visual Interfaces* (AVI '14). ACM, New York, NY, USA, 125-128. DOI=http://dx.doi.org/10.1145/2598153.2598200

Cyprien Pindat, Emmanuel Pietriga, Olivier Chapuis, and Claude Puech. 2012. **JellyLens: content-aware adaptive lenses.** In *Proceedings of the 25th annual ACM symposium on User interface software and technology* (UIST '12). ACM, New York, NY, USA, 261-270. DOI=http://dx.doi.org/10.1145/2380116.2380150

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