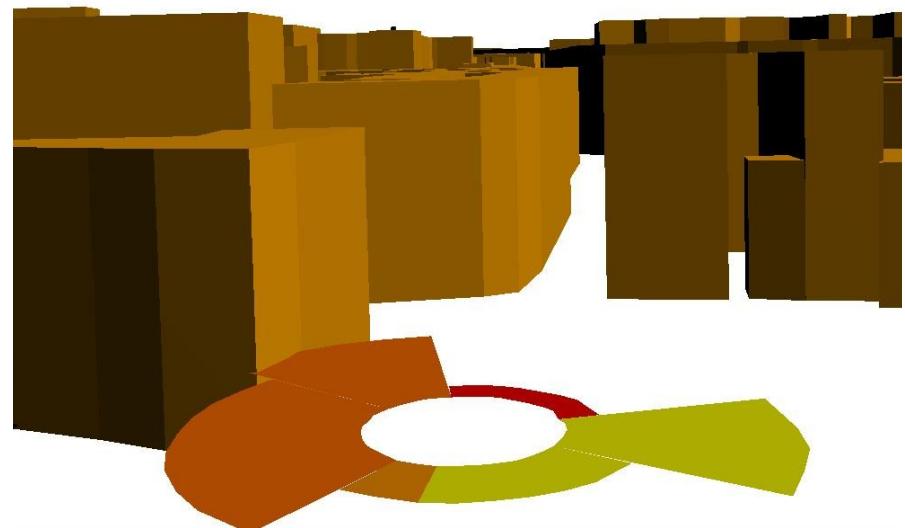
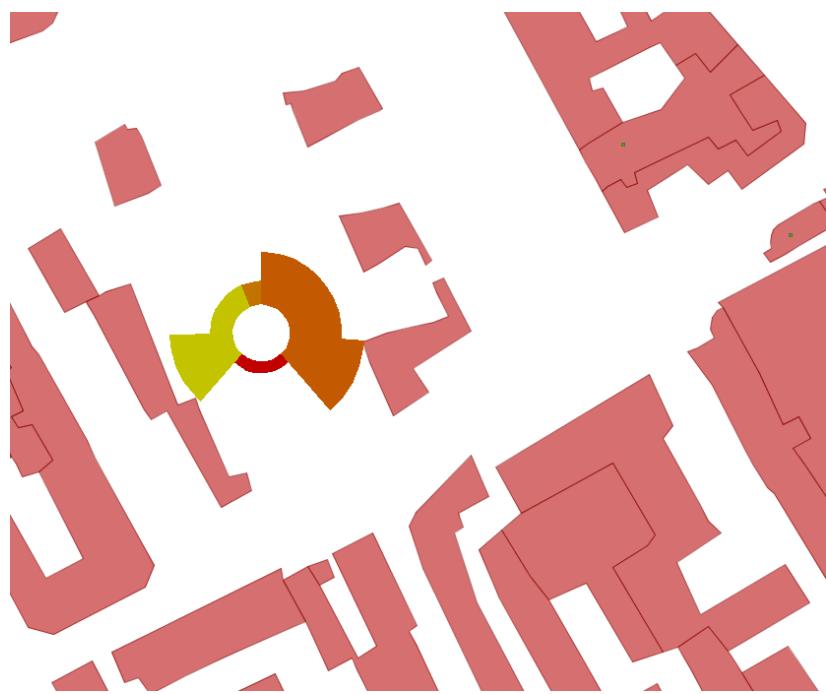


ENRICHING A 3D WORLD WITH SYNTHETIC AND VISIBLE INFORMATION ABOUT THE DISTRIBUTION OF POINTS OF INTEREST



Mickaël BRASEBIN, Charlotte Hoarau, Bénédicte BUCHER

Cogit, France

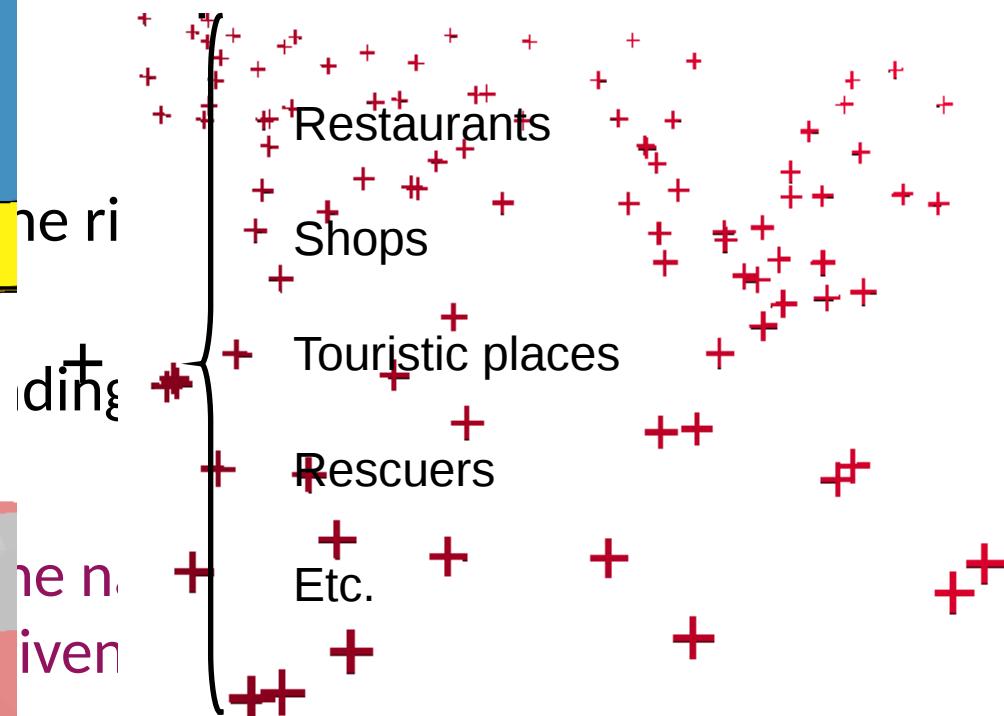
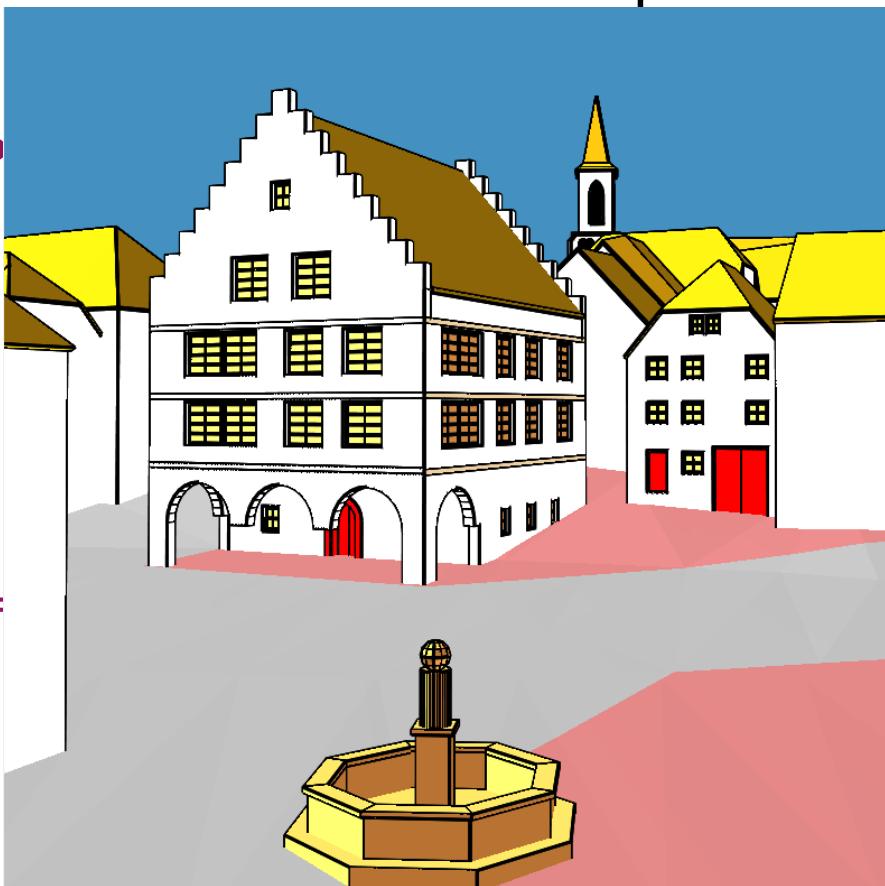


Introduction

- Context of the proposal
- Global approach
- Results
- Conclusion and perspectives

Context

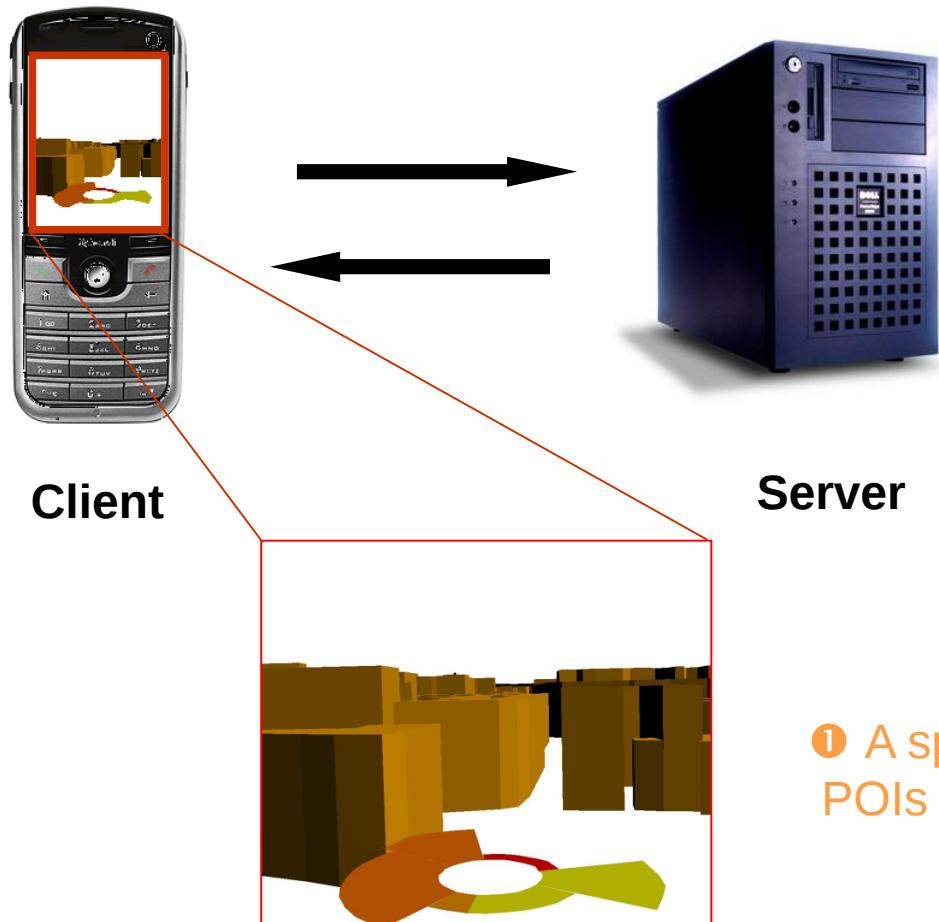
- Difficulties to navigate in a 3D world to find information
 - In a local view, the zone is often too small to know in which direction to pan the window



➡ What is the configuration of the POIs in my neighbourhood ?

Global approach

- Schema of our proposition
(Currently emulated)



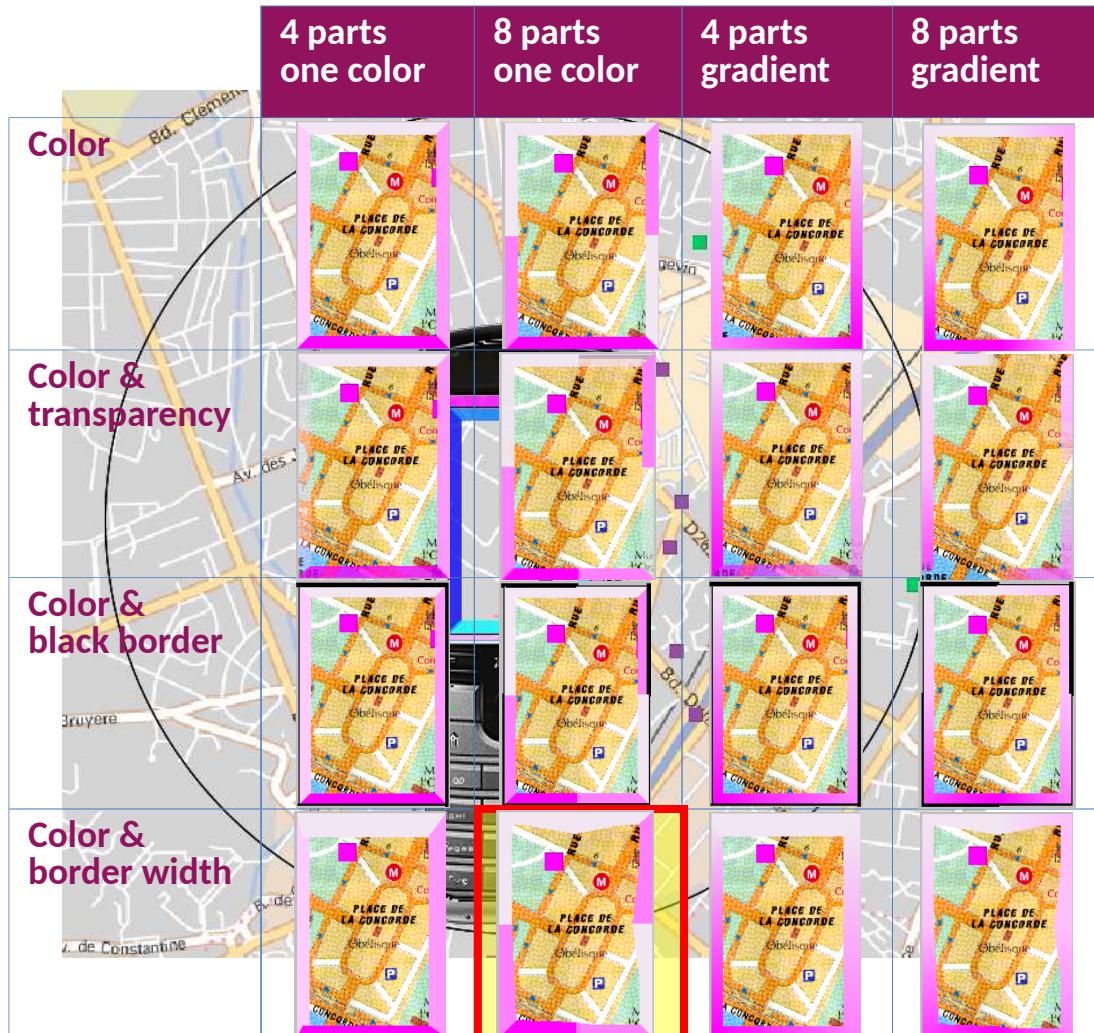
② An ego-centered aggregation function

2D Spatial Analysis

① A specific visual clue to represent POIs distribution

Clue to represent POIs distribution

[Plaizairau, 2009]

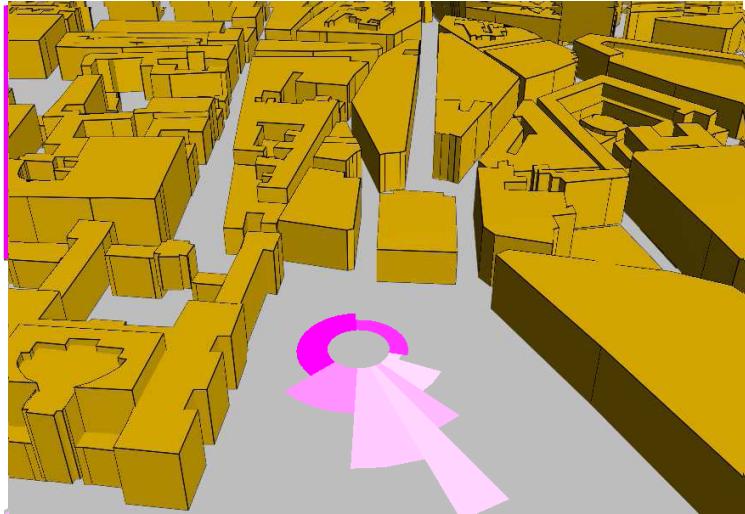


- 2D frame for mobile mapping
- Test different visual variables to convey information of density and distance
- Preferred configuration
 - Border width and color saturation
 - One color
 - No preference for having these visual variables conveying density or distance information

Adaptations to 3D world

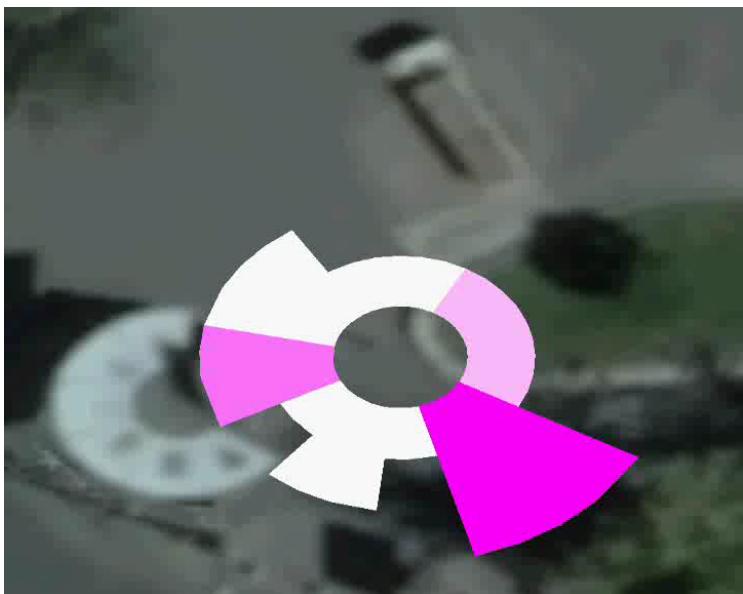
- Transformation of the initial clue to better fit with 3D

- Disc in front of camera
- Partition of borders adapted to POIs configuration with aggregation function



- Placement of the disc

- Parallel to ground
- Function of aggregation centered on the camera



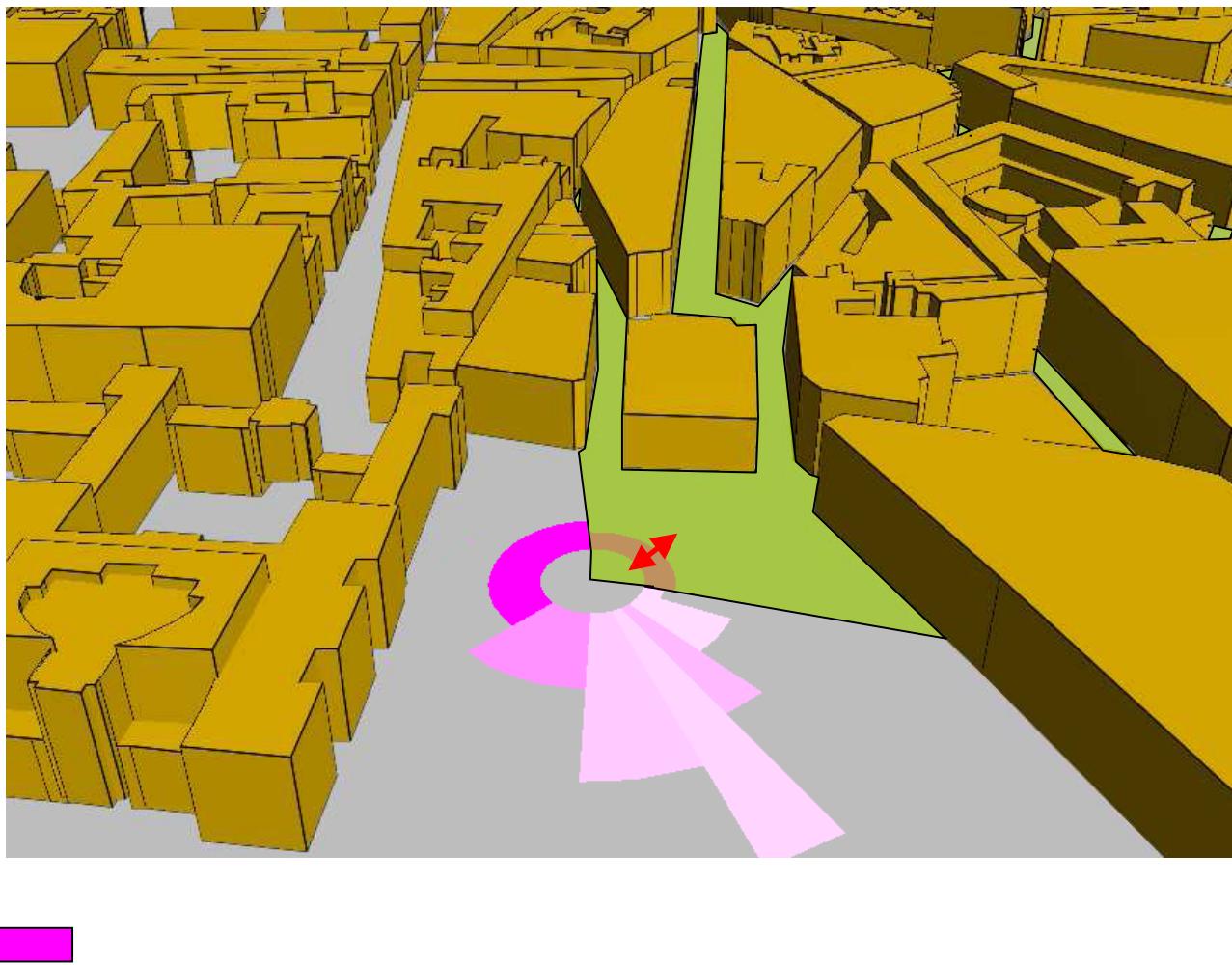
Adaptations & Results

- 3 information

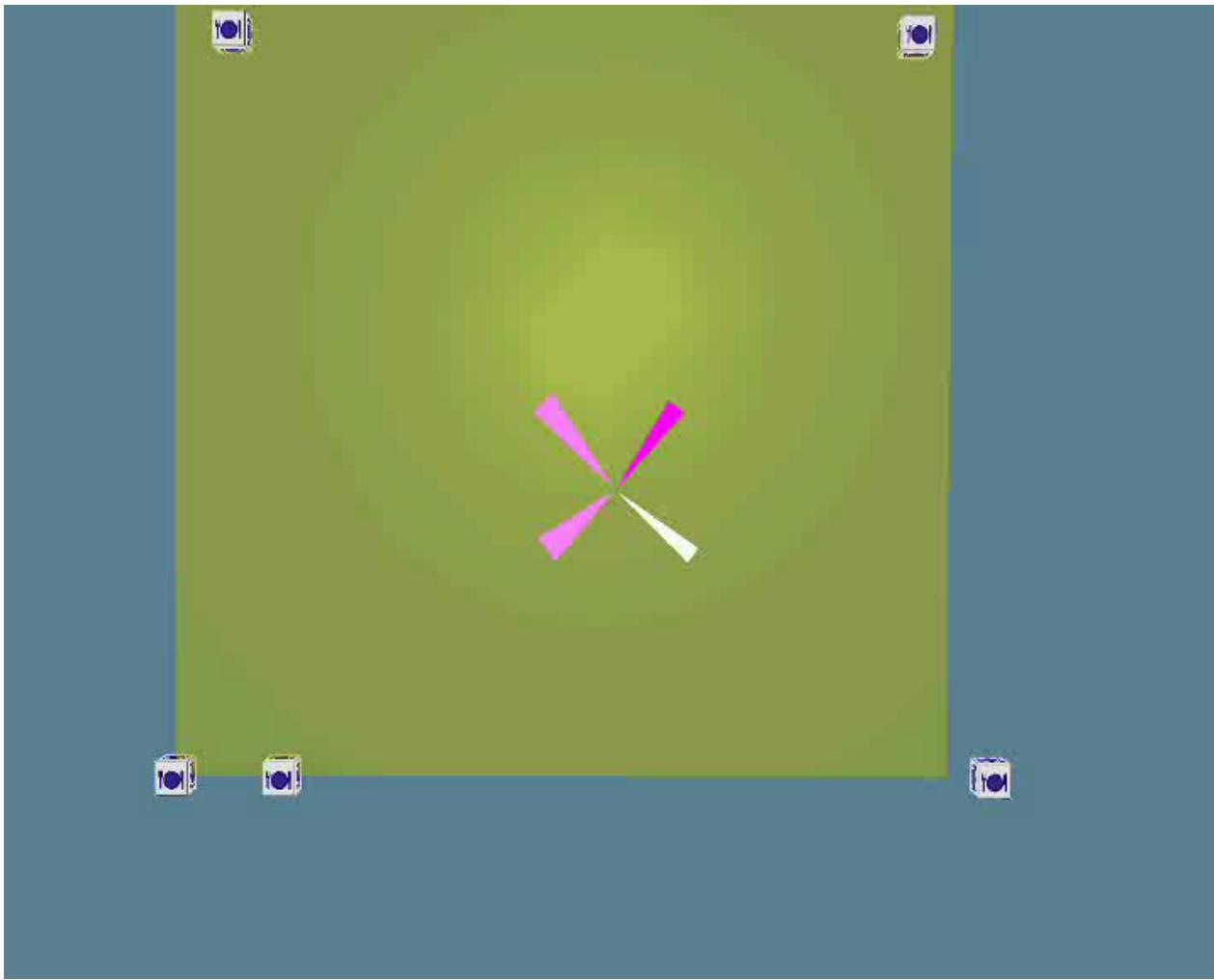
- Angle : direction of a group

- Width of a sector : mean distance to a group

- Lightness : density of POI in a direction



Results



Conclusion

- A method to enrich a 3D world with 2D analysis
- Next step : toward a mobile system
- Thoughts about aggregation of information in mobile device are recent at the laboratory
 - Testing aggregation or other functions
 - Adapting the process for continuous spatial indicators
- Interactivity with the clue
 - Moving to a group by clicking on a edge
 - Accessing to list of POIs in a direction
 - Representing POIs on the clue
- Tests on user to assess the interest of these variables
 - Elaborating use cases and dataset
 - To test :
 - Utility
 - Different functions of aggregation
 - Time stamps

Thank for your attention

- COGIT : <http://recherche.ign.fr/labos/cogit/>
- GeOxygene: <http://oxygene-project.sourceforge.net/>
- Email : mickael.brasebin@ign.fr

