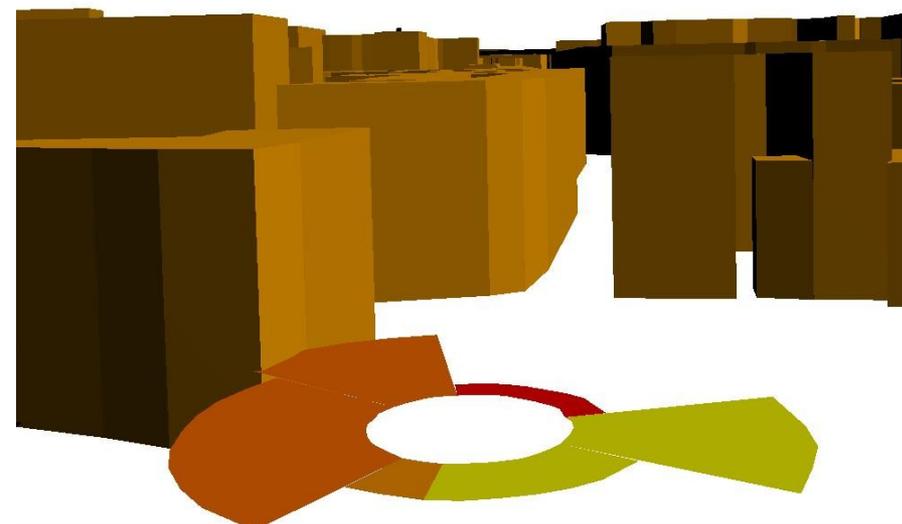
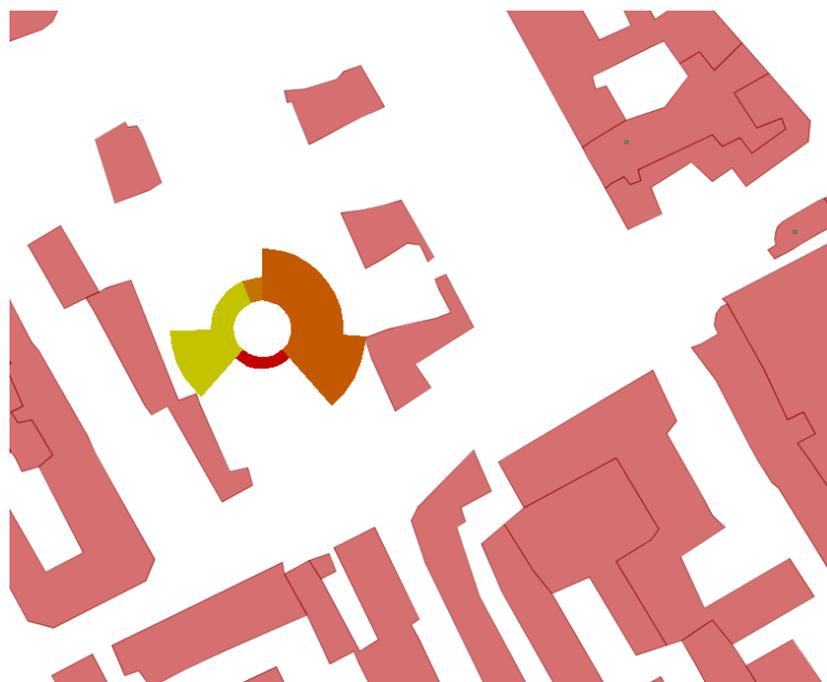


ENRICHING A 3D WORLD WITH SYNTHETIC AND VISIBLE INFORMATION ABOUT THE DISTRIBUTION OF POINTS OF INTEREST



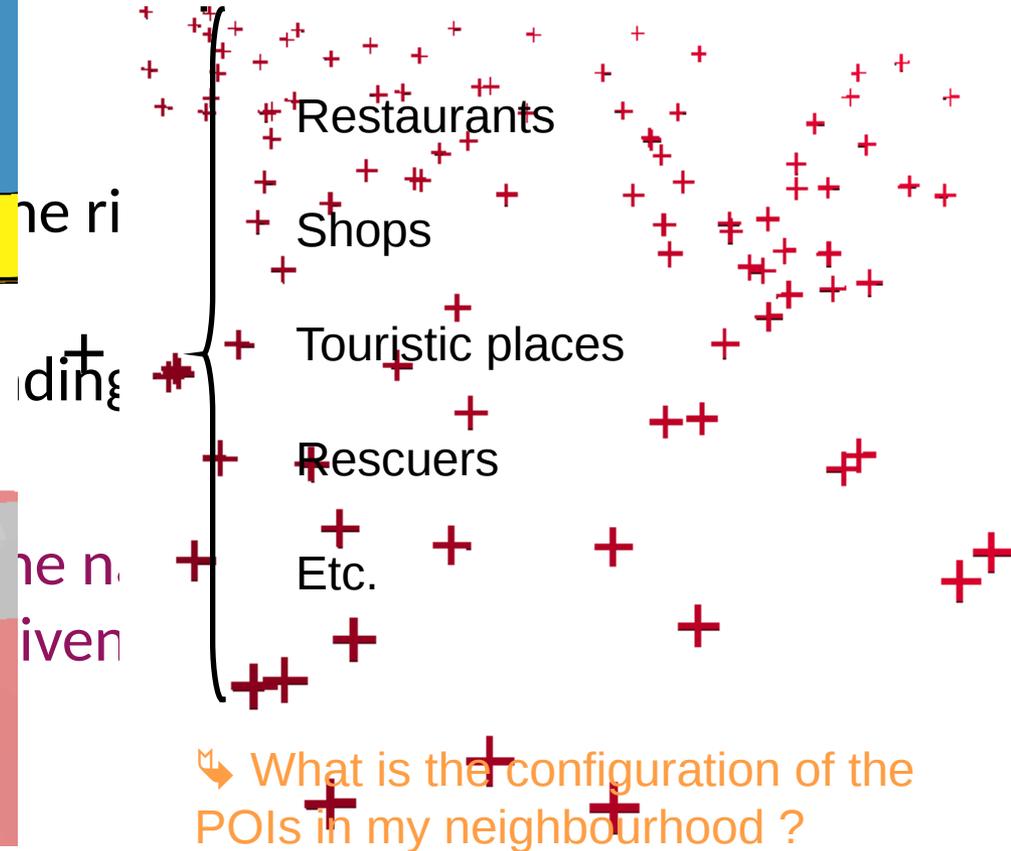
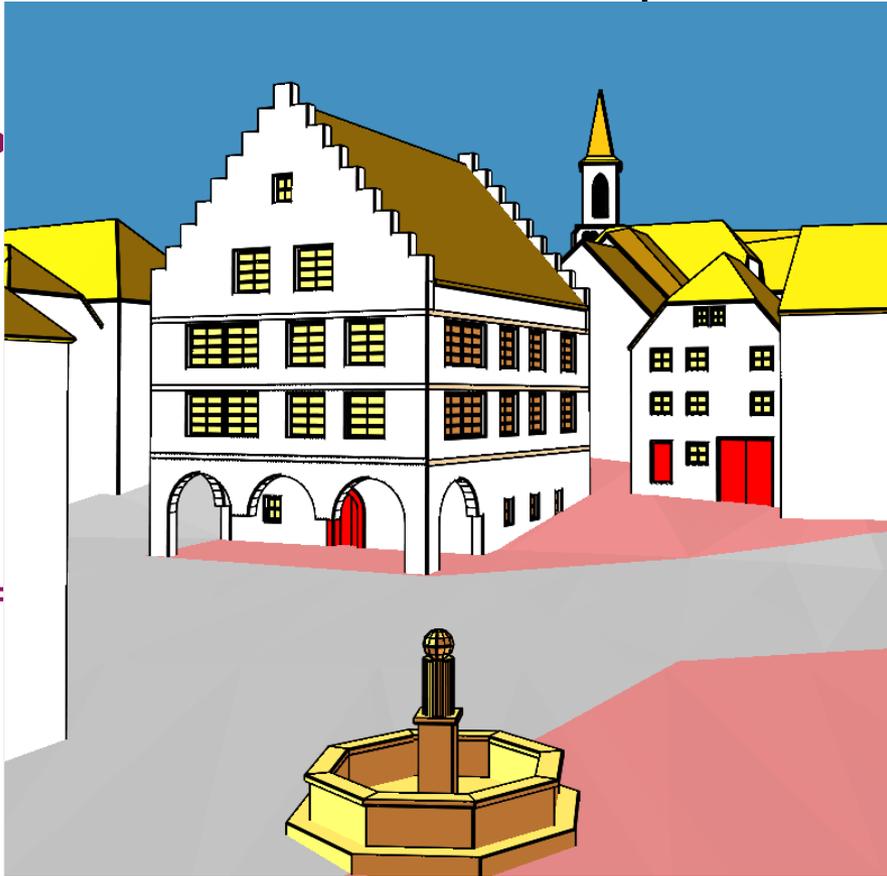
Mickaël BRASEBIN, Charlotte Hoarau, Bénédicte BUCHER

Cogit, France



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

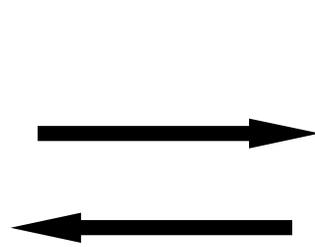
- Difficulties to navigate in a 3D world to find information
 - In a local view, the zone is often too small to know in which direction to pan the window



- Schema of our proposition
(Currently emulated)

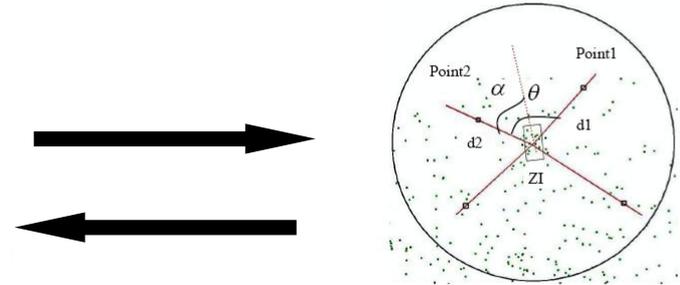


Client



Server

- ② An ego-centered aggregation function



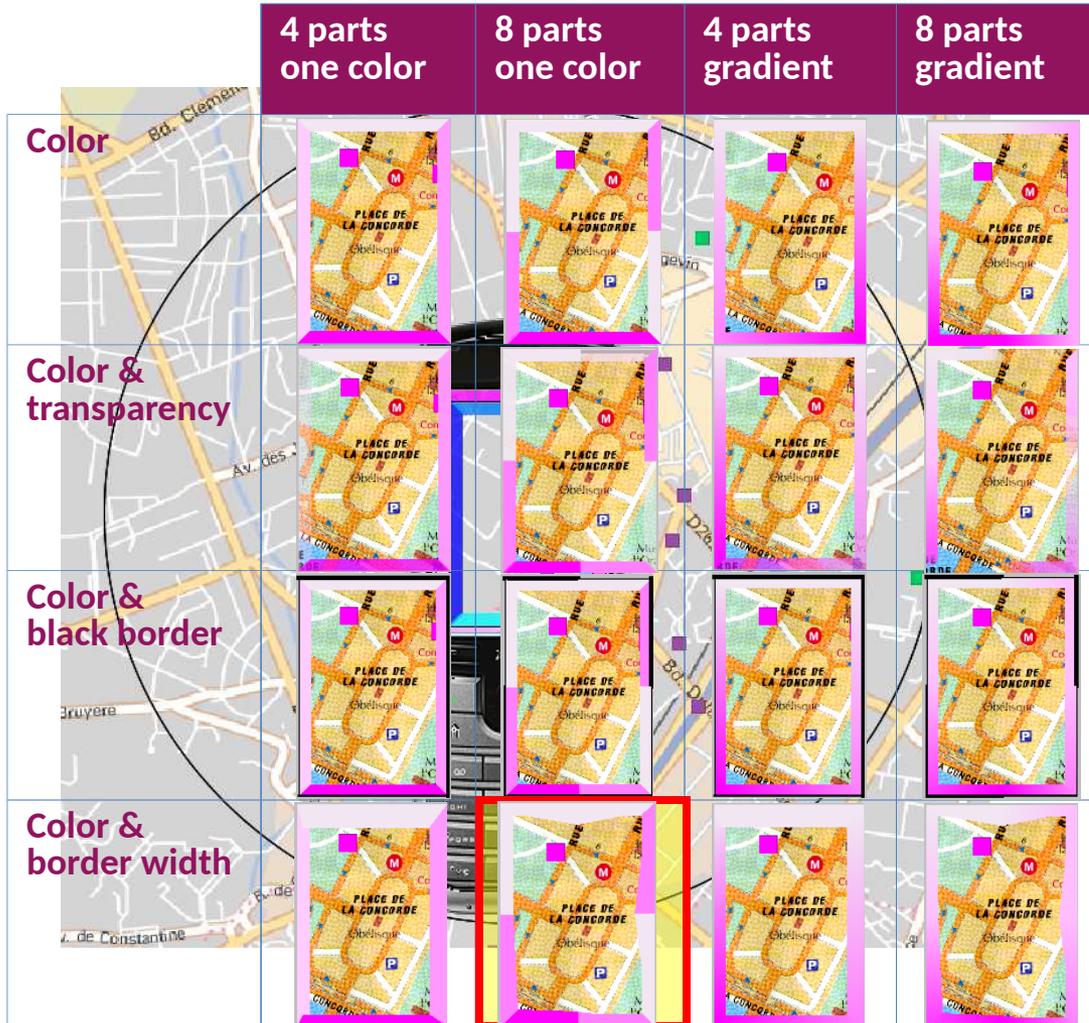
2D Spatial Analysis



- ① A specific visual clue to represent POIs distribution

Clue to represent POIs distribution

[P. Li, 2009]

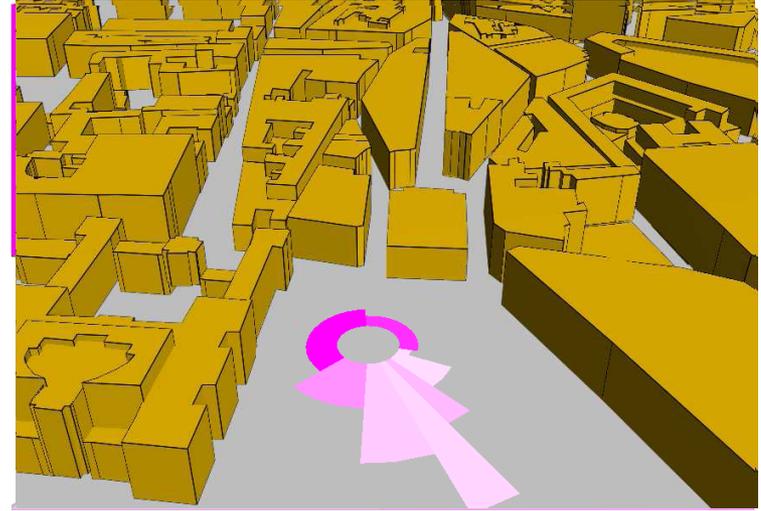


- 2D frame for mobile mapping
- Test different visual variables to convey information of density and distance
- Preferred configuration
 - Border width and color saturation
 - One color
 - No preference for having these visual variables conveying density or distance information

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

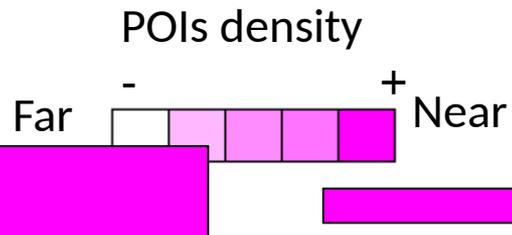
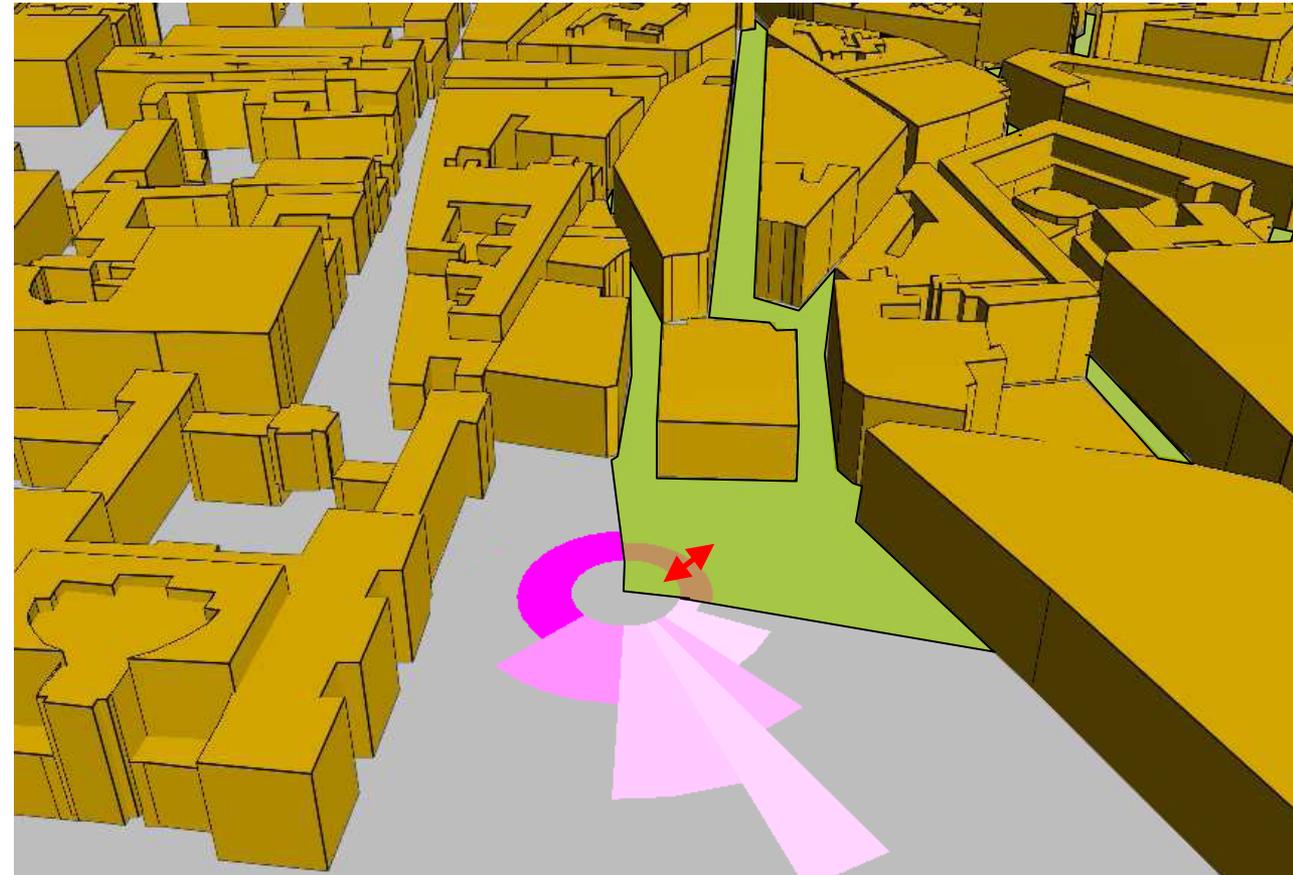


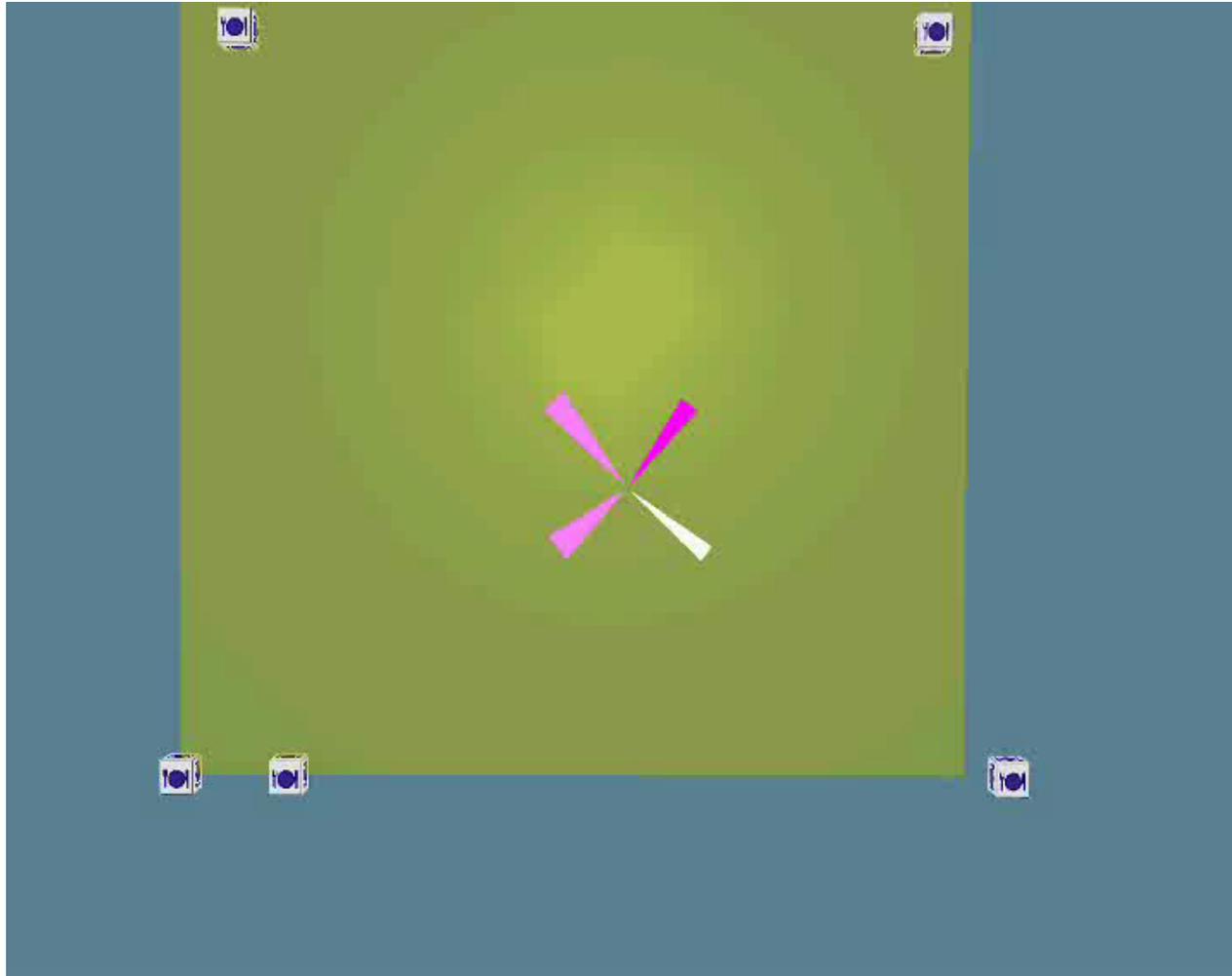
- 3 information

- Angle : direction of a group

- Width of a sector :
mean distance to a group

- Lightness : density of POI
in a direction





- 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

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

