

# Building Social Networks

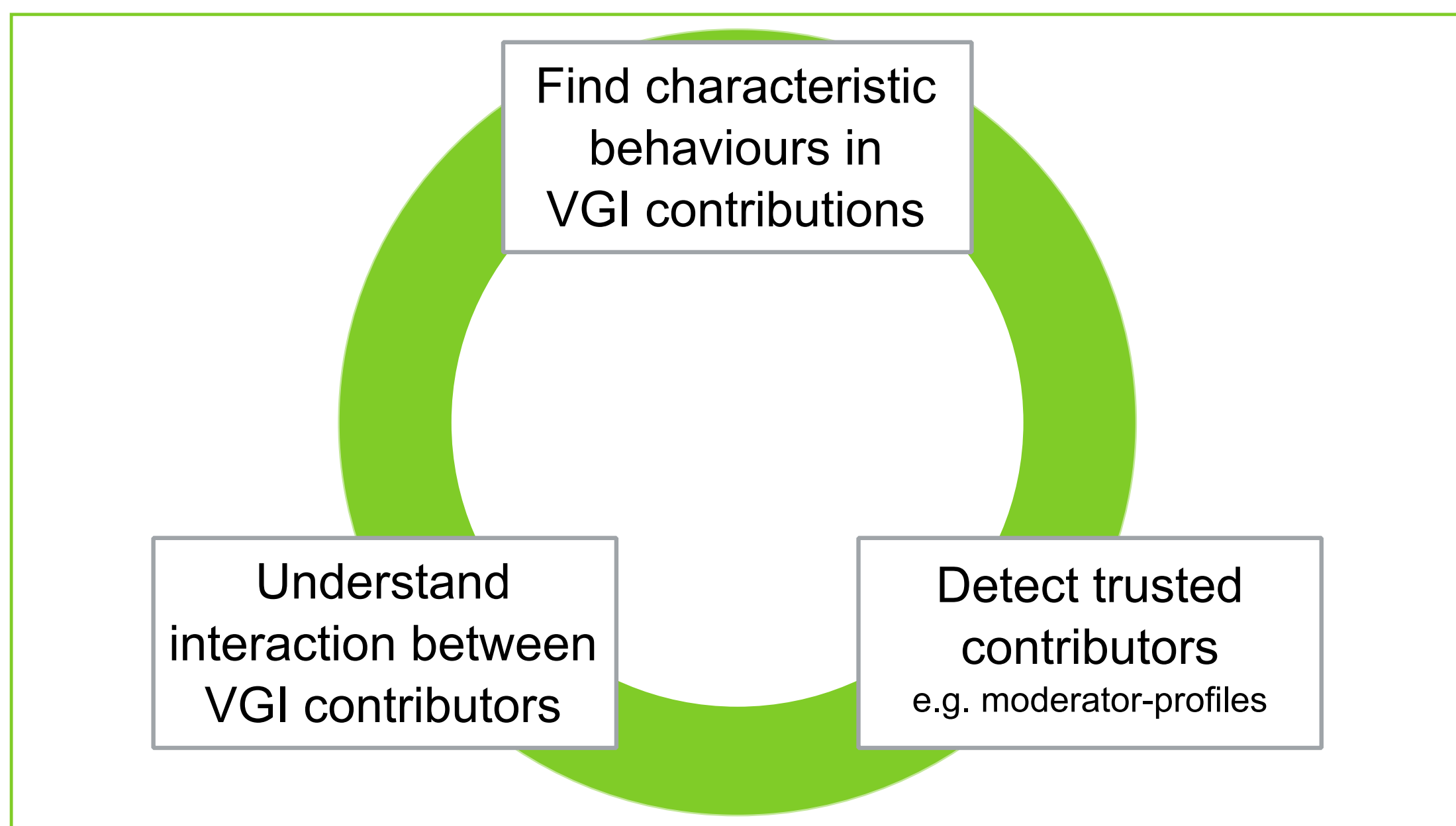
## in Volunteered Geographic Information Communities: What Contributor Behaviours Reveal About Crowdsourced Data

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### Objectives



**Key question: how to model contributors' interactions based on VGI contributions?**

### Interactions Between VGI Contributors

There are many ways to contribute in VGI: contributors can either map elements from scratch, or make use of existing objects in order to modify them or to create new objects (see Figure 1).

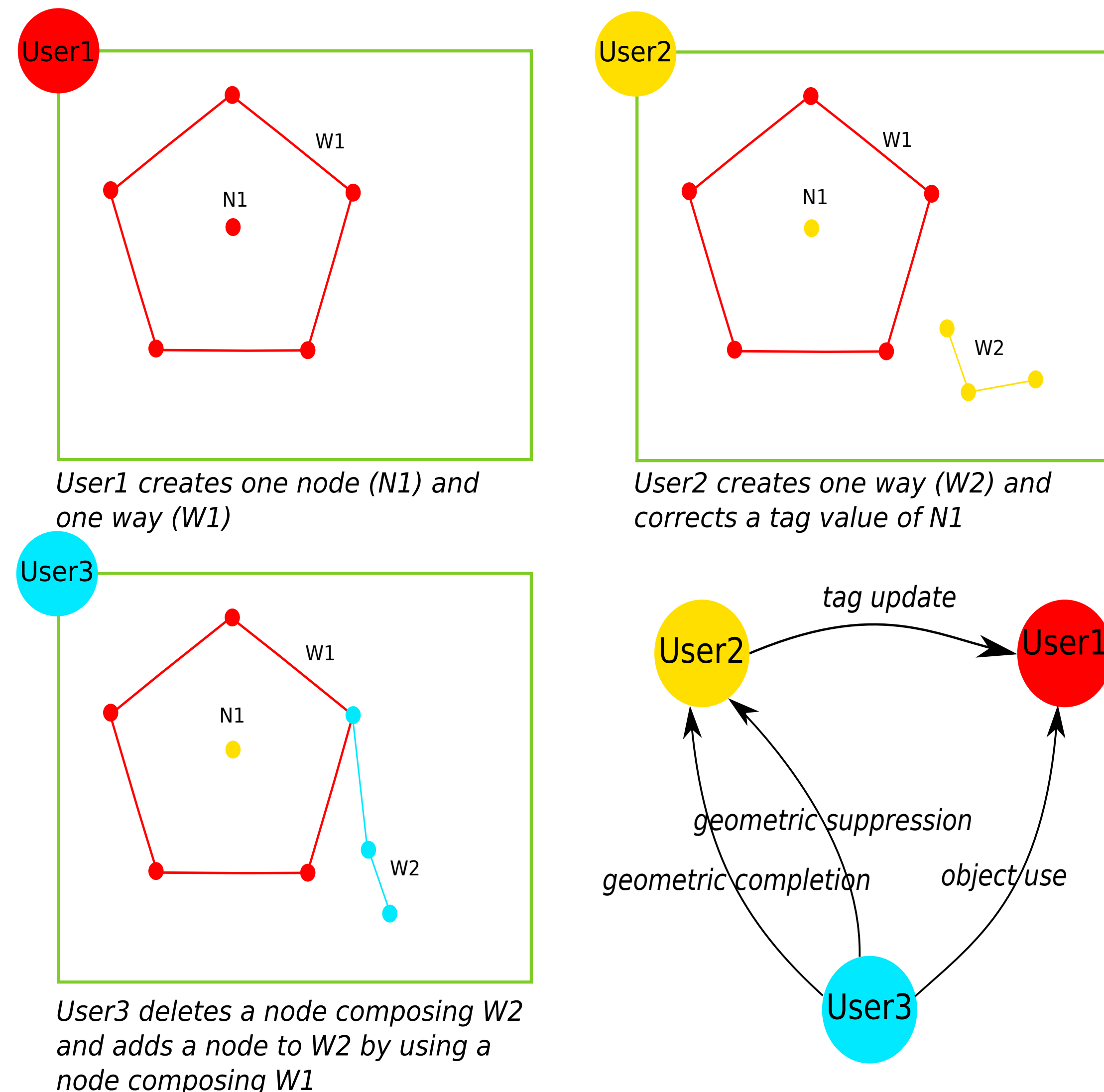


Figure 1. Possible interactions between VGI contributors in mapping activity

### Contact

#### Committee in charge

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### Multiplex Network

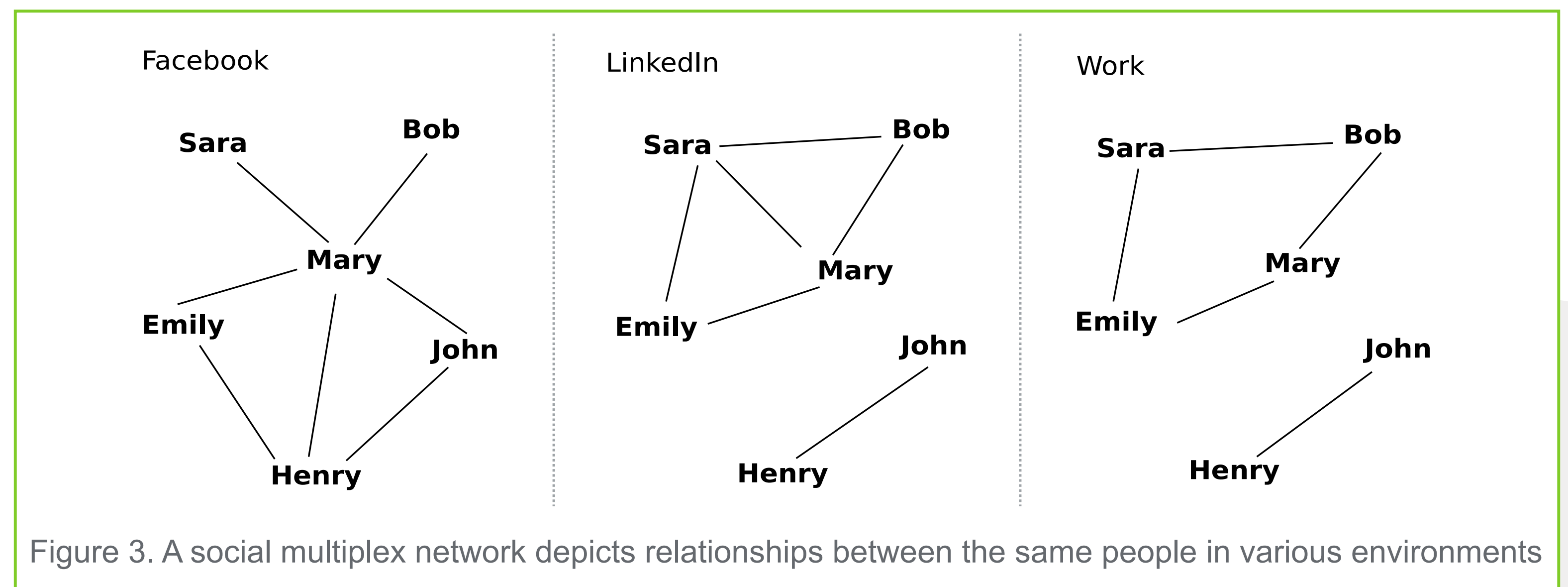


Figure 3. A social multiplex network depicts relationships between the same people in various environments

### VGI Contributors Multiplex Interaction Network Model

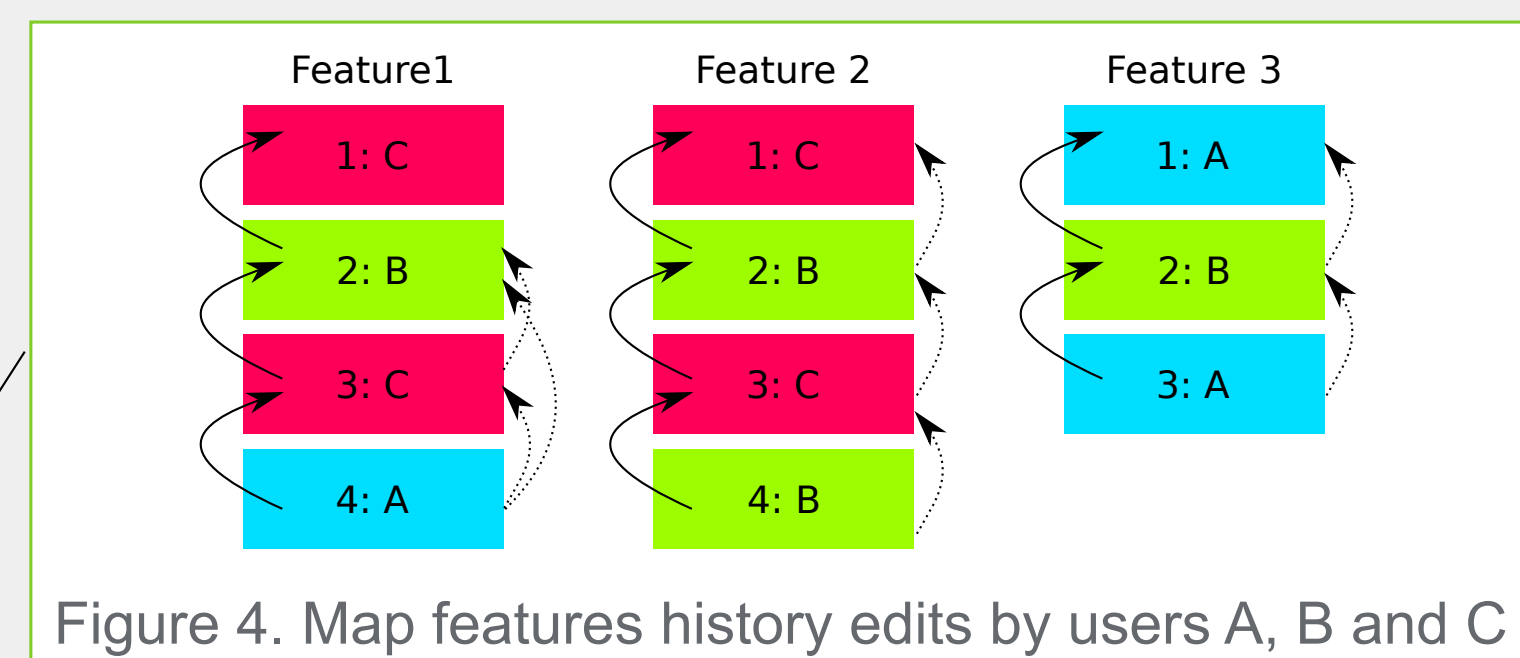
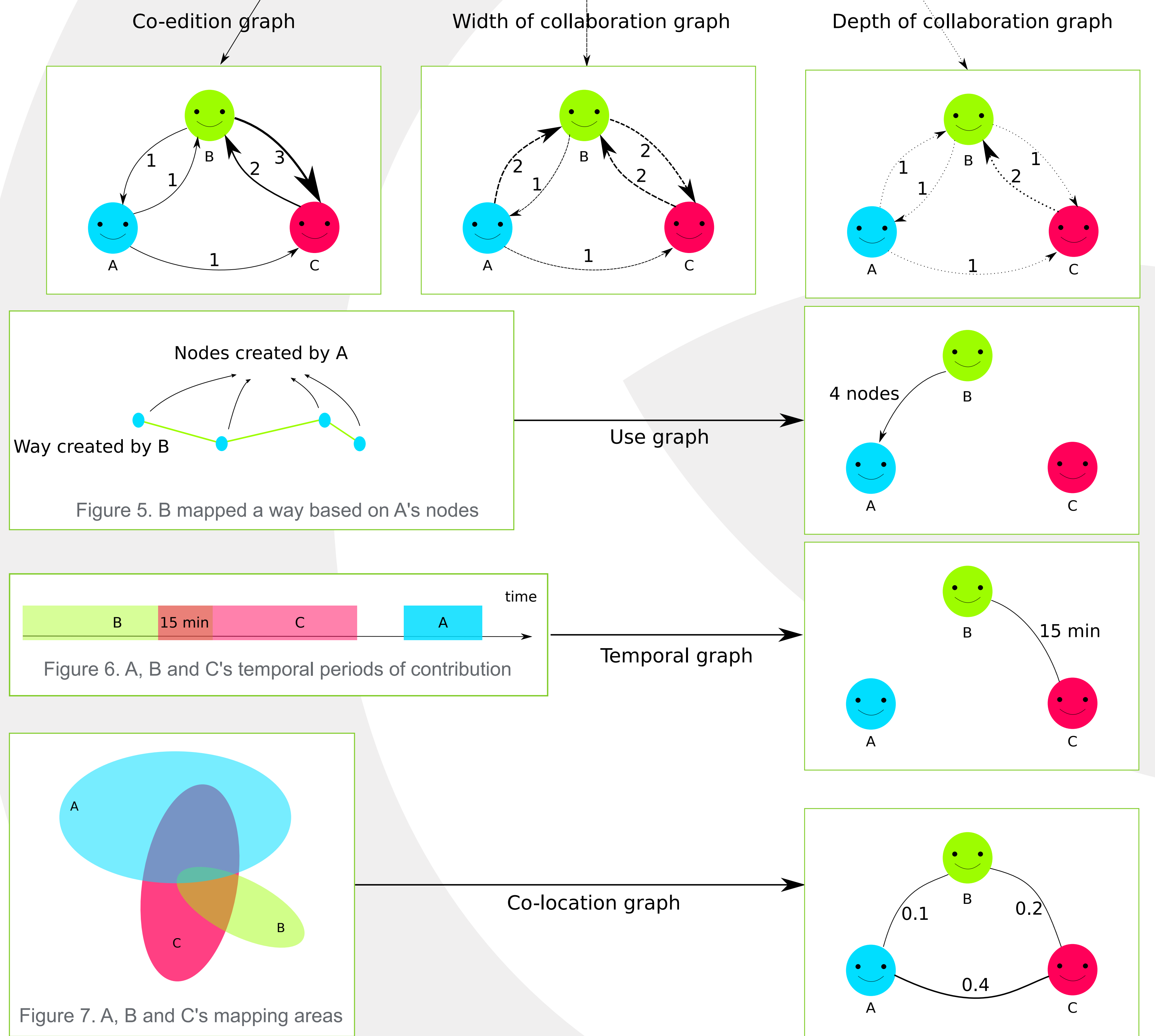


Figure 4. Map features history edits by users A, B and C



### Application on OpenStreetMap data in Paris between 2010-2015

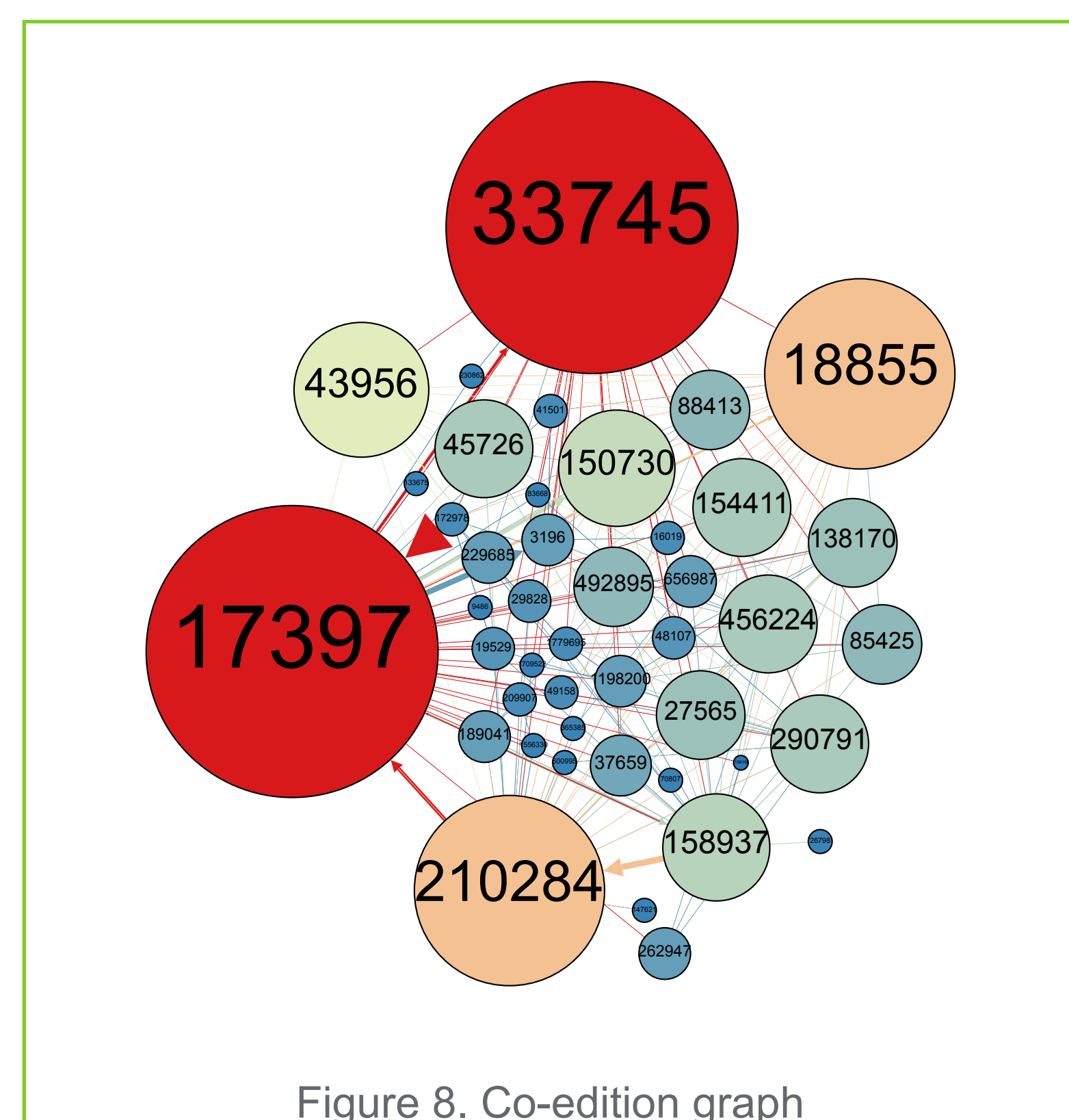


Figure 8. Co-edition graph

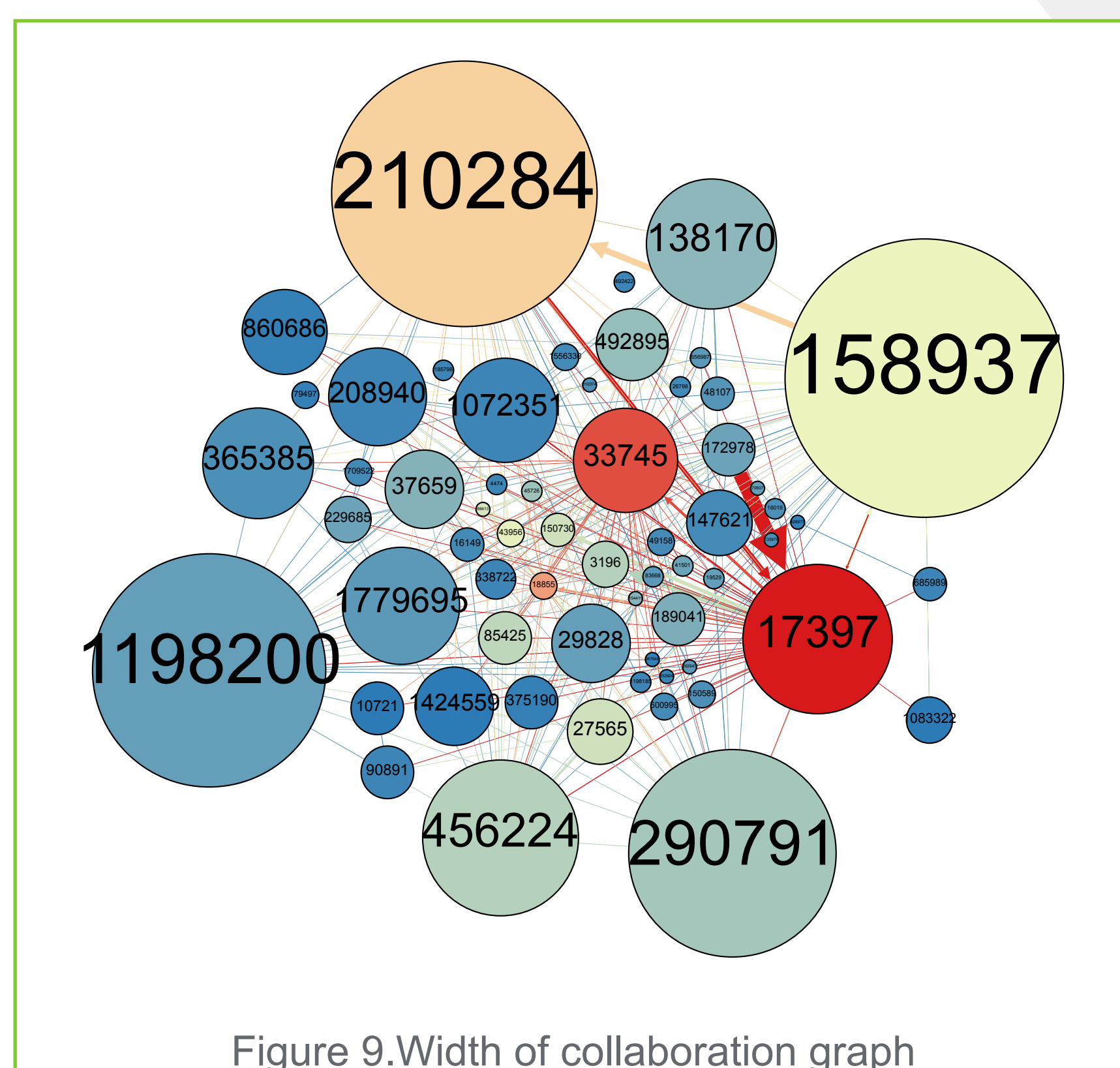


Figure 9. Width of collaboration graph

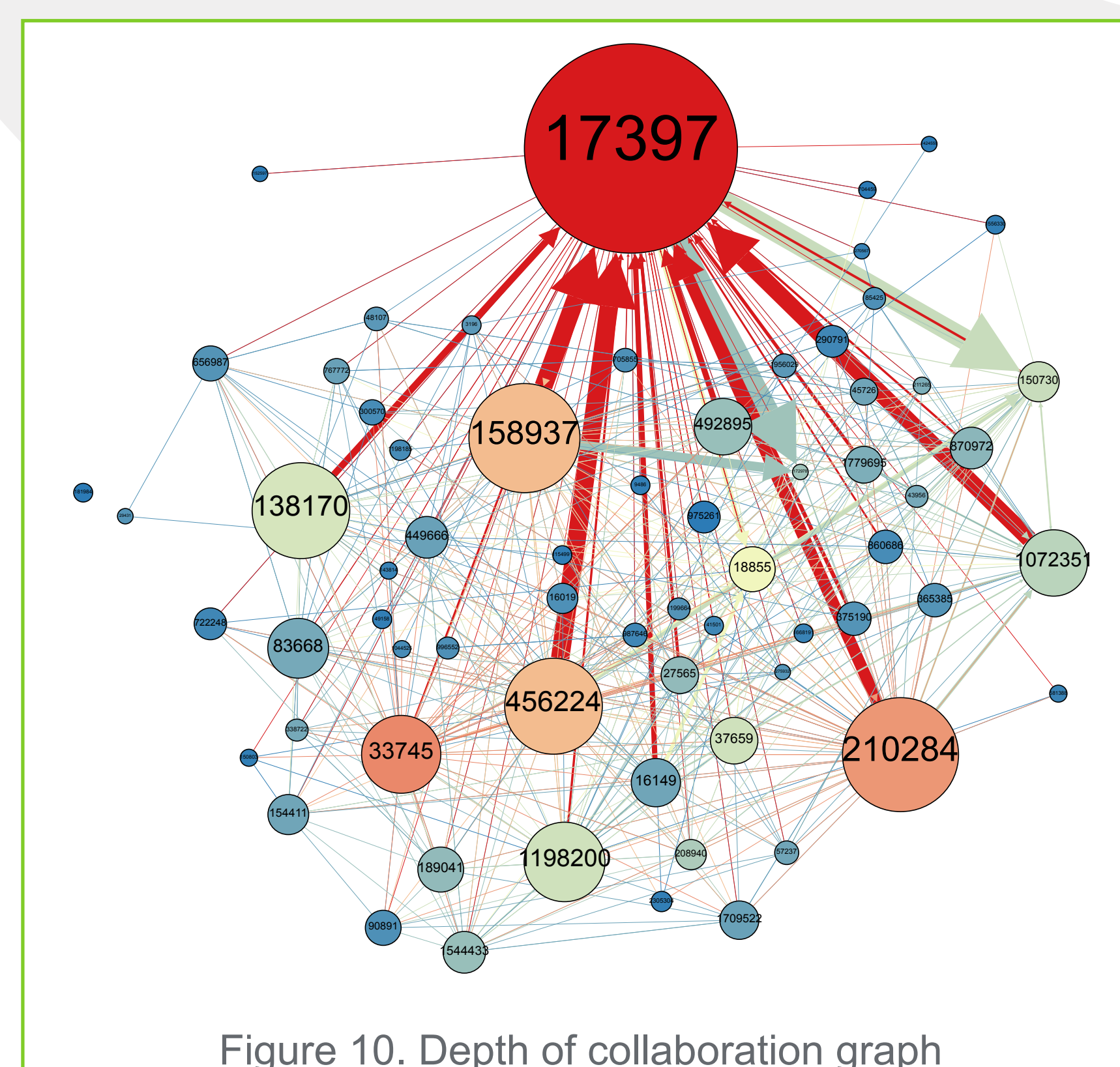


Figure 10. Depth of collaboration graph

Legend:  
 node outdegree  
 node indegree

### References

- Mooney P, Corcoran P (2014) Analysis of Interaction and Co-editing Pattern Amongst OpenStreetMap Contributors. Trans GIS
- Stein K, Kremer D, Schlieder C (2015) Spatial Collaboration Networks of OpenStreetMap. In: Jokar Arsanjani J, Zipf A, Mooney P, Heilich M (eds) OpenStreetMap in GIScience. Lecture notes in geoinformation and cartography, pp 167-186, Springer International Publishing.