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# 5-Weeks Course on Interactive Visual Network Exploration

Week 6: Exploring Networks with  
Timeline, Map, and Multi-view

Feb 16<sup>th</sup>, 2022

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Visual+  
Interactive  
Data

*Inria*



THE UNIVERSITY  
of EDINBURGH

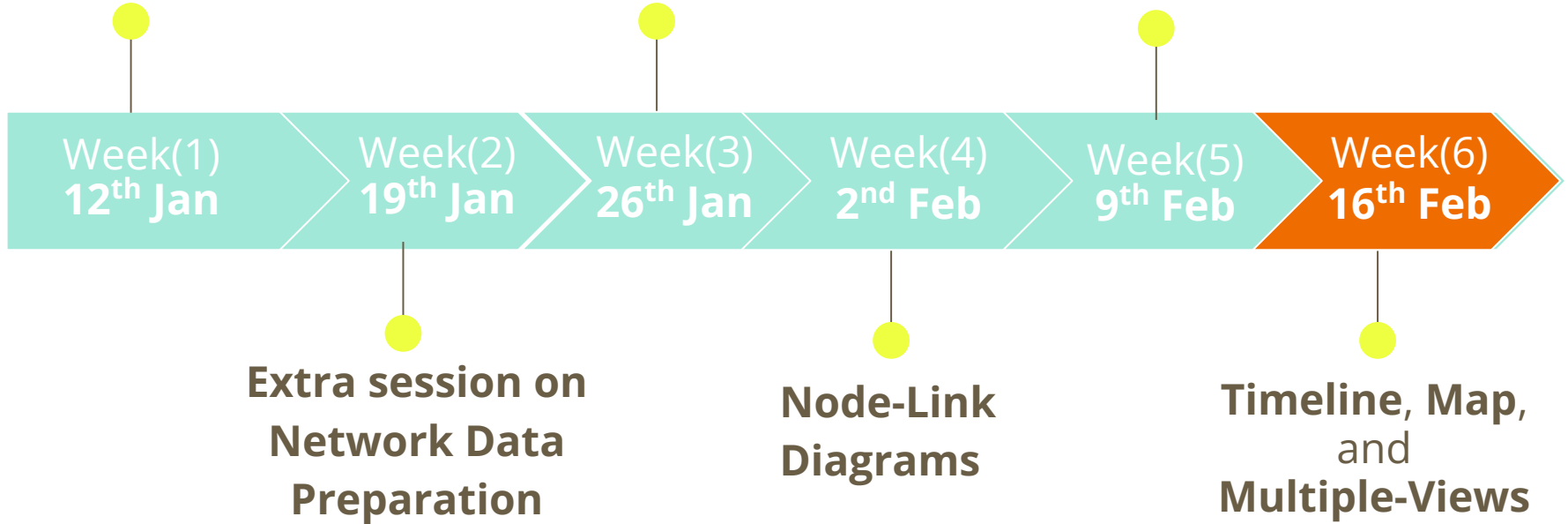
# Course Goals

1. **Structure your network data and prepare it** for visualization with the Vistorian.
2. **Define goals of your exploration** and what you aim to learn about your network data using visualizations.
3. **Know a range of network visualizations**, through theory and hands-on use.
4. **Use different types of interactive visualizations** to explore your data.

## Network Data Preparation

## Data Shaping Techniques and Challenges

## Adjacency Matrices



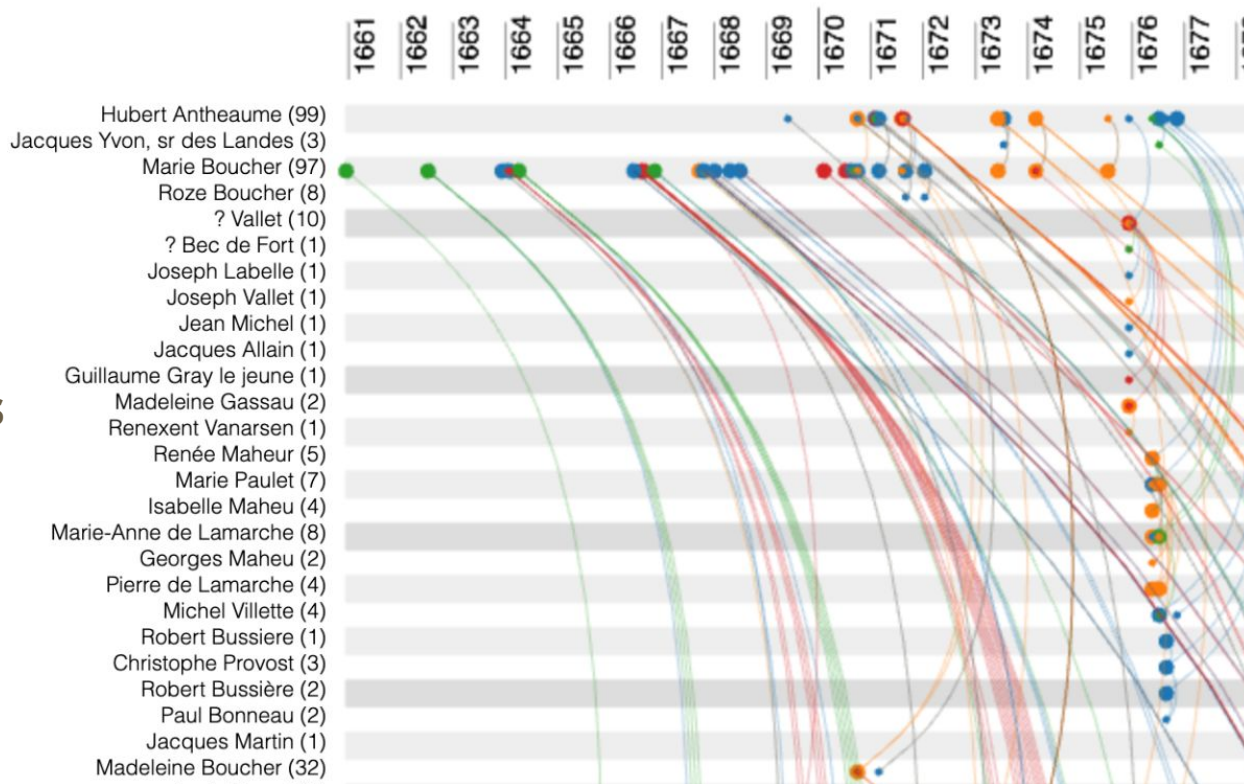
# Session Outline

- Timeline Visualization
- Maps
- Demo
- Group Exercise
- Questions & Discussion

# Timeline Visualization

## Visual Encoding:

- **Arc**
- **Arc colors:** Different colors mean different types of relation.
- **Numbers in brackets at node labels:** Node degree
- **Link start (Larger) circle and end circle (smaller) size**

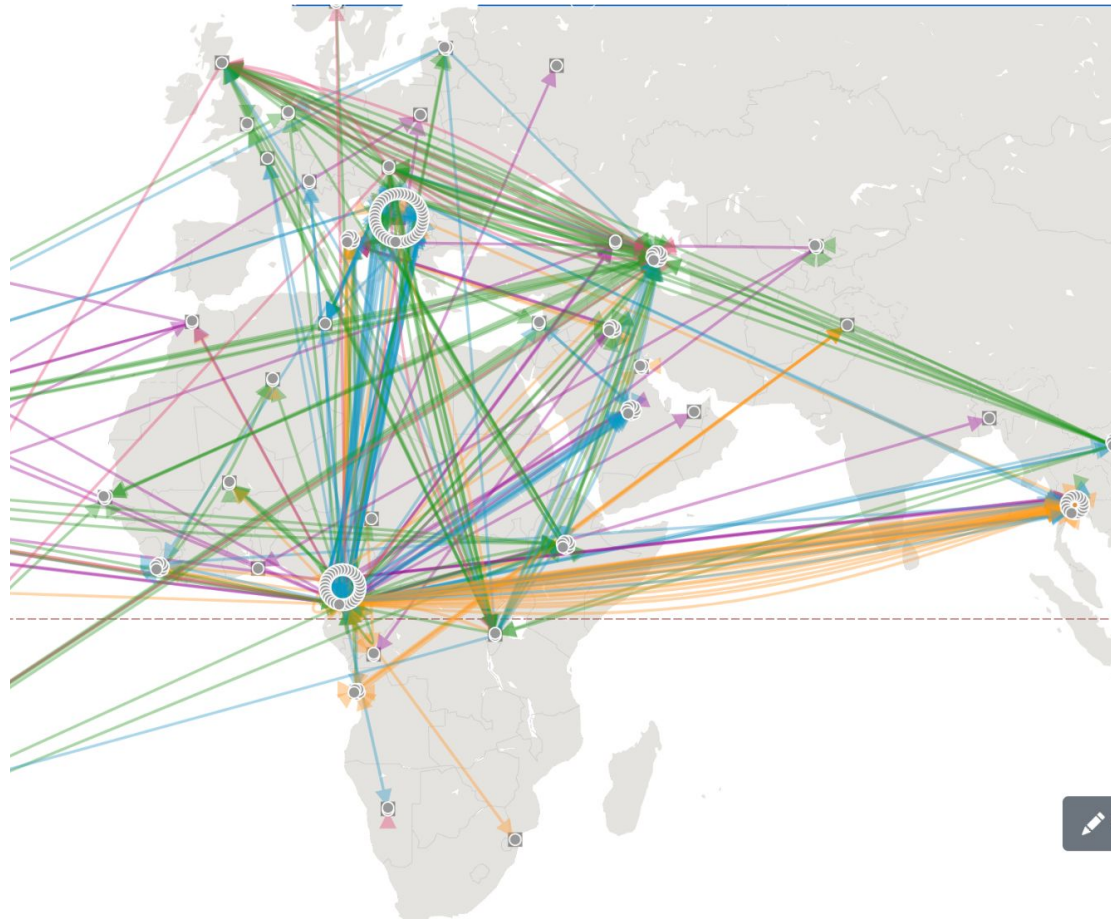


Node Overlap

# Map Visualization

## Visual Encoding:

- **Node Transparency:**  
Transparent nodes are free, i.e. they do not have geographic positions associated with them.
- **Node Overlap:** defines the spatial distance between nodes with the same position.



**Demo**

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# Group Exercise : Discussion of General Findings (10 min)

- Did you find something special about visualizations in your field? Such as:
  - certain structures,
  - sparse or dense,
- Did you find certain techniques that helps the best to prepare your data?

**History**

**Law & Politics**

**Natural Sciences**

**Medicine & Health**

**Business & Management**

**Diverse-Topics**



# Questions & Discussion

**Thank you for Sharing this  
Journey with Us**

Please share your feedback with  
us through:

[https://forms.office.com/r/pjLp1j  
mpLj](https://forms.office.com/r/pjLp1j<br/>mpLj)

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# Where can I head from here ..

- Associating graph with ML (e.g. link prediction)  
<https://www.youtube.com/watch?v=GtFxfe07Tik>
- Complimenting your Network Exploration with Statistical Analysis