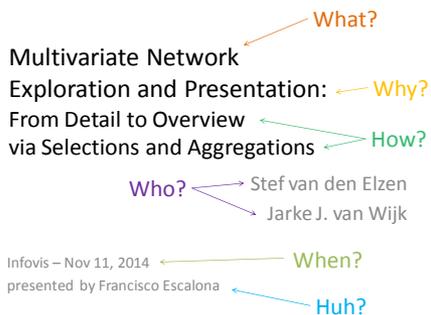


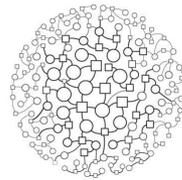
# Multivariate Network Exploration and Presentation: From Detail to Overview via Selections and Aggregations

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Infovis – Nov 11, 2014  
presented by Francisco Escalona



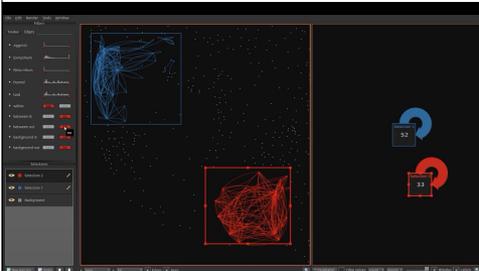
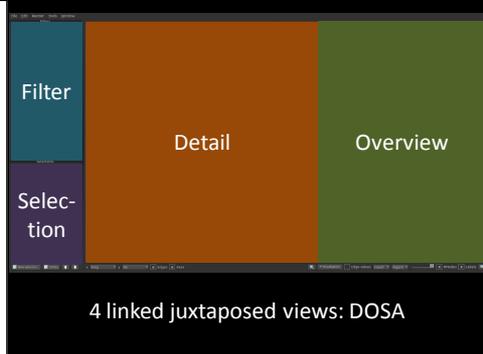
## Multivariate Network



Example:  
Census data by county of USA

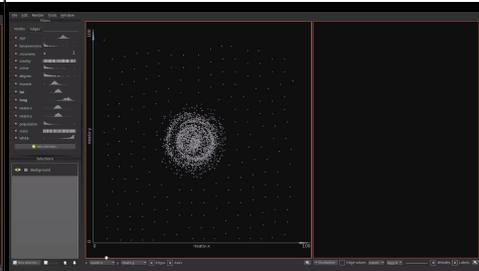
Nodes (also edges)

	Math	Physics	Dance	Drama
85	95	70	65	
90	80	60	50	
65	50	90	90	
50	40	95	80	
40	60	80	90	

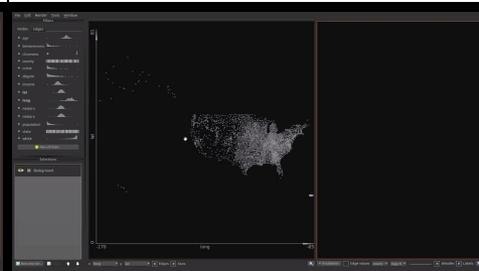


Exploration task

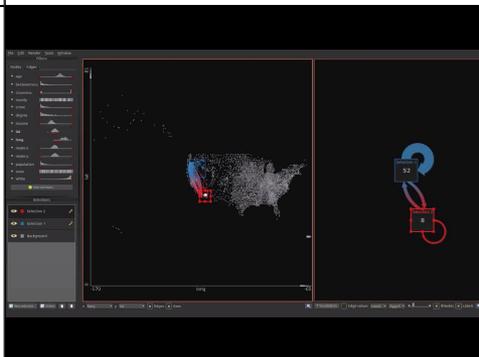
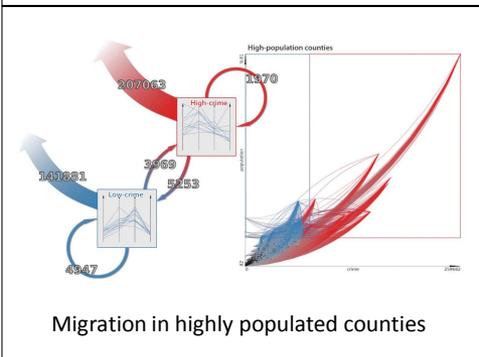
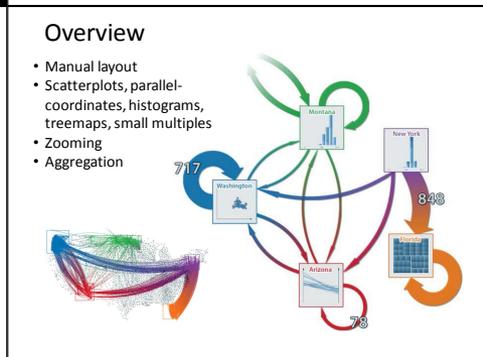
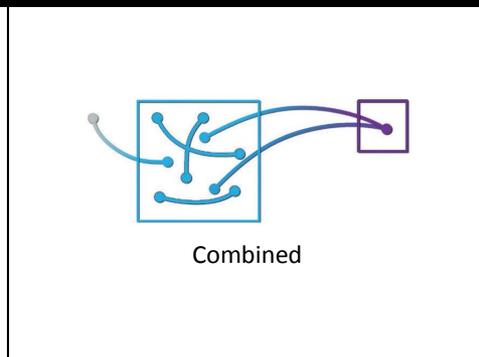
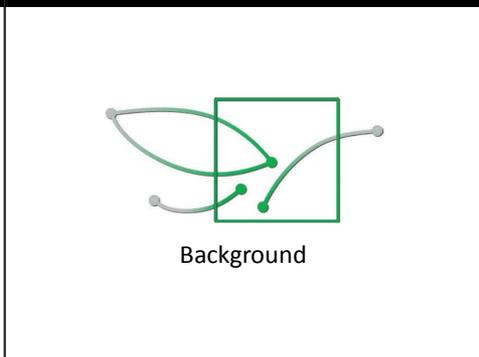
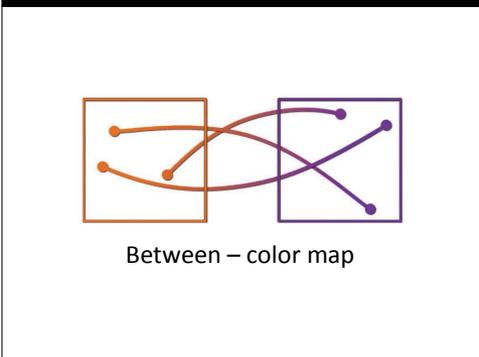
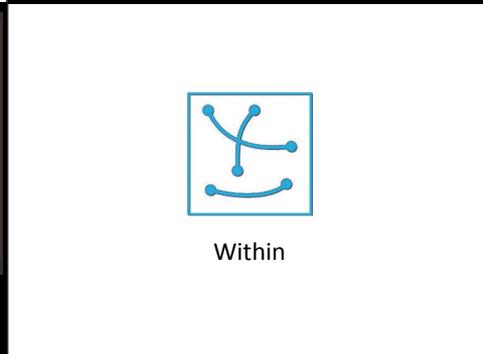
Presentation task



Adjustable 2D projection of nodes



Selection: boxes, ranges



## Scale

- 5-10 selections (2-6 expected)
- 1-2 dozen attributes
- 100s-1000s of nodes
  - more with aggregation
- L < 4N

## Strengths

- Both network exploration and multivariate analysis
- Intuitive, easy to use (?)
- Dynamic exploration, visual querying
- Can be used by novices
- Expressive
  - Time
  - Topology

## Limitations

- Partitions only by nodes
- Only supports ranges
- Limited scaling up



- No help on where to start
- Overview can be too summarized
- Axis can be difficult to see

- One tool in a toolkit

## In Summary

A tool for **exploration and presentation** of **multivariate network data** using **selection and aggregation** in juxtaposed **linked views**

