

# 1783: Experience IBM Graph in Action

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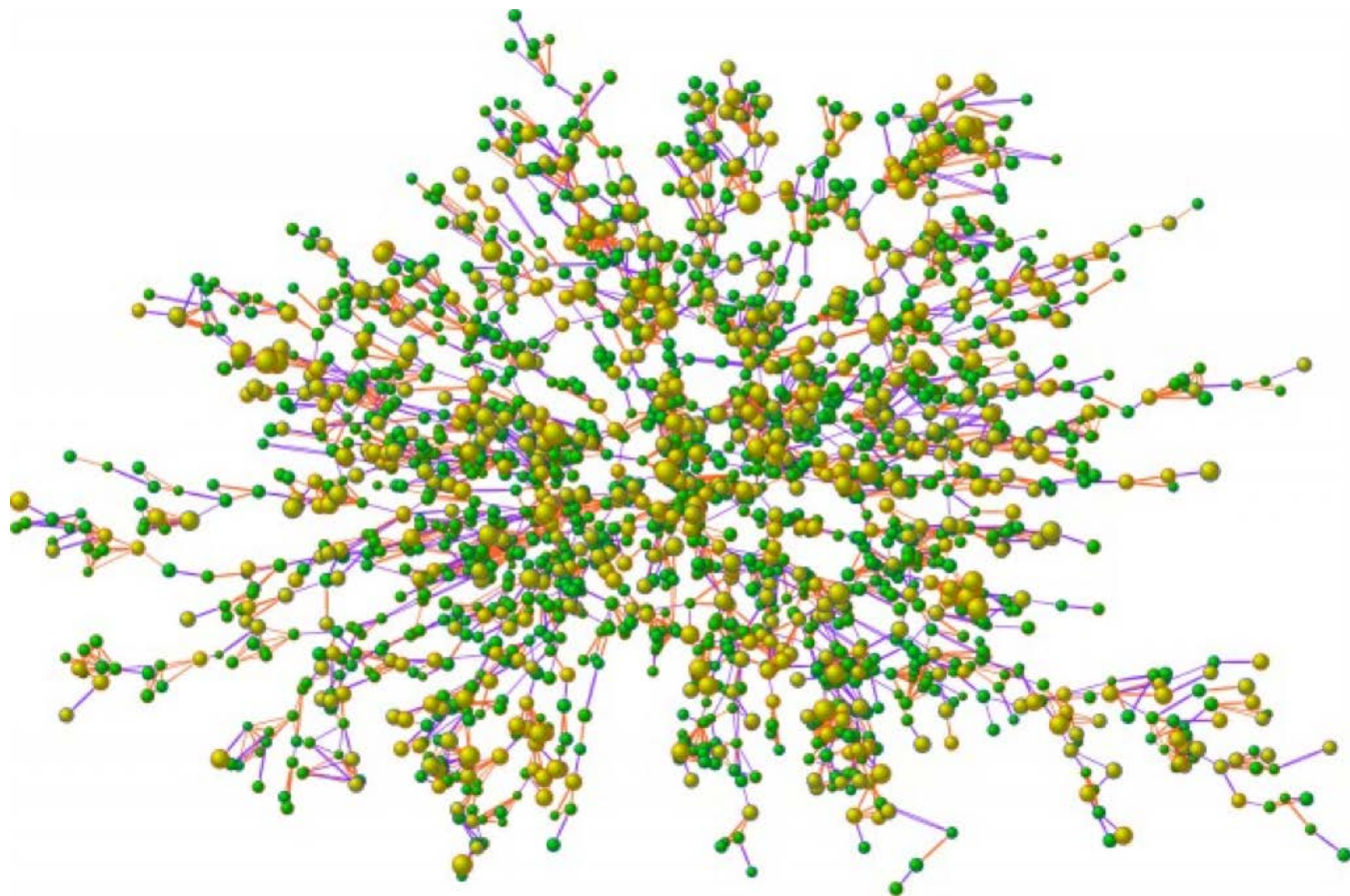
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**World of  
Watson  
2016**

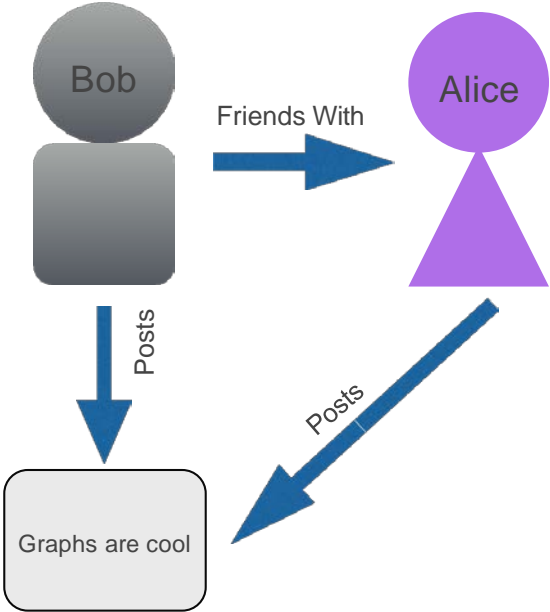


# IBM Graph





# Social Network



## Users

id	Name	Age	Location
1	Bob	32	Boston
2	Alice	21	San Diego

## Friends

User 1	User 2
1	2

## Posts

id	Post
1	Graphs are cool!

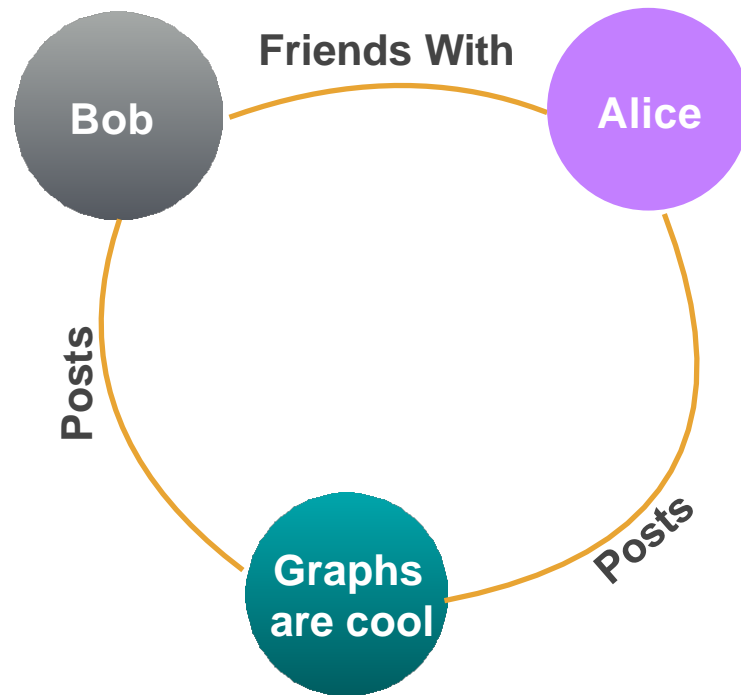
## Users Posts

User	Post
1	1
2	1



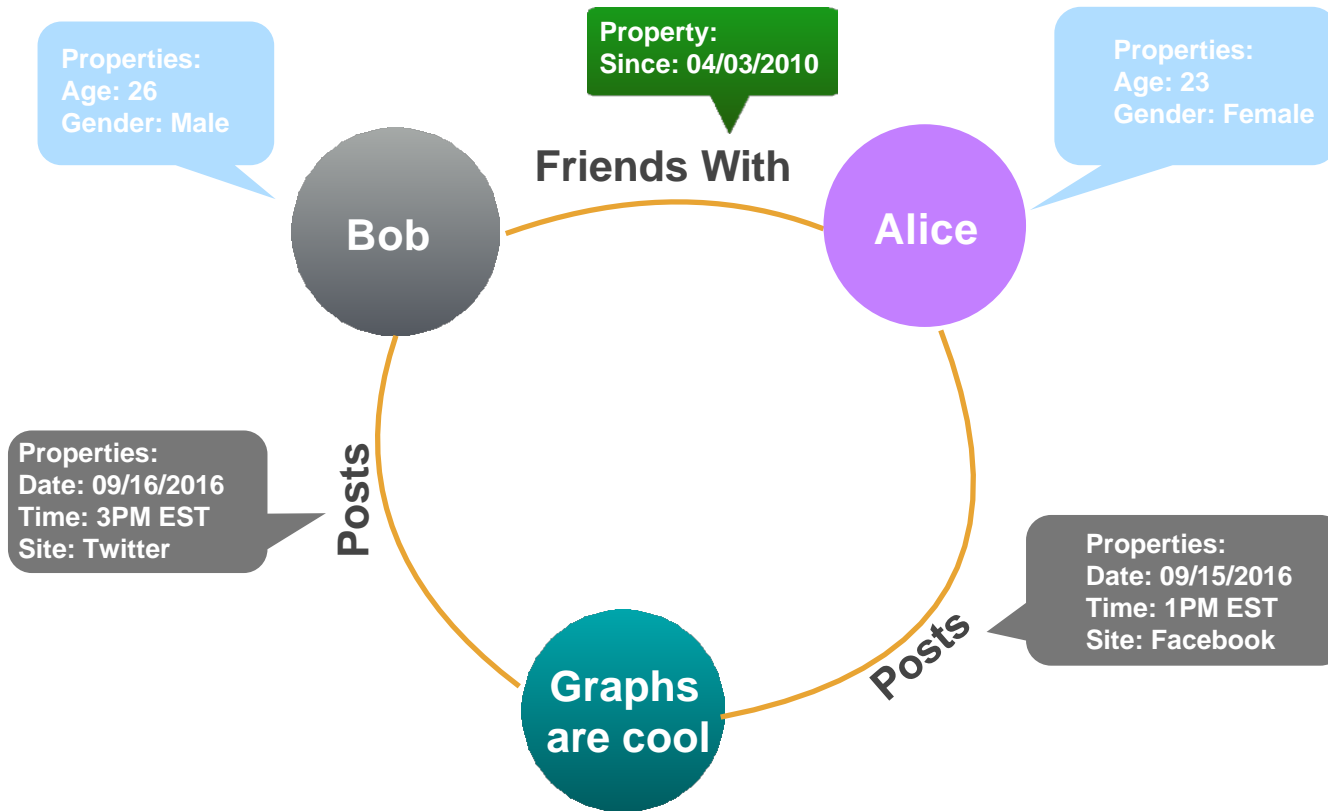
# Graphs

A graph is a representation of a set of nodes where some pairs of nodes are connected by edges.





# Property Graphs





### The Big Lie

**Graph databases can only  
be used for social  
networks!**



## Graph Use Cases

- ❖ Recommendation engines
- ❖ Anomaly/Fraud Detection
- ❖ Network Analysis/Route planning
- ❖ Social Networks
- ❖ Identity/Access Management
- ❖ Graph-based search
- ❖ Master Data Management

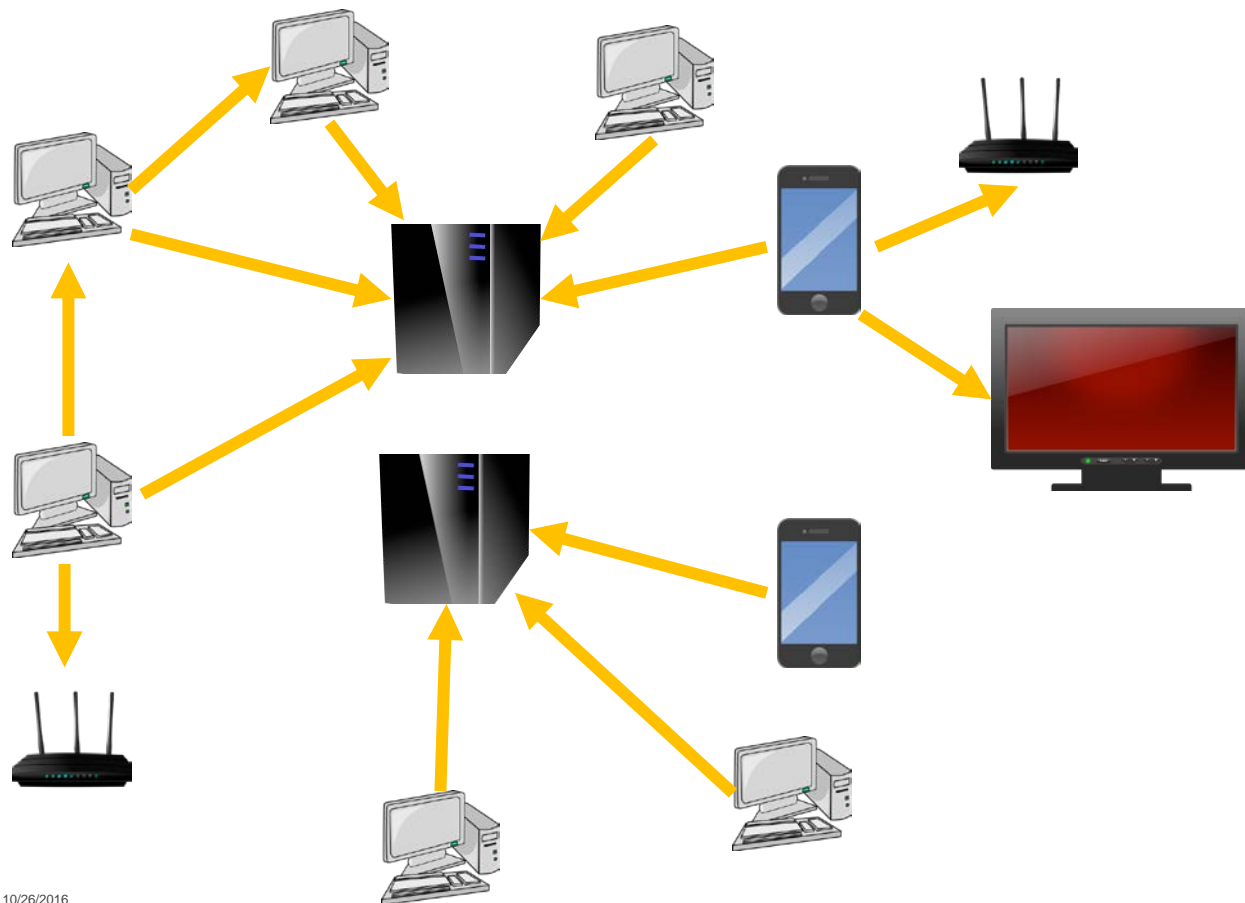
**Graphs** are built for complex or highly networked/ connected data.

**RDBMSs** are designed for ordered data or data that can be easily structured.

**Graph is the ‘Natural’ way to represent and query connected information.**

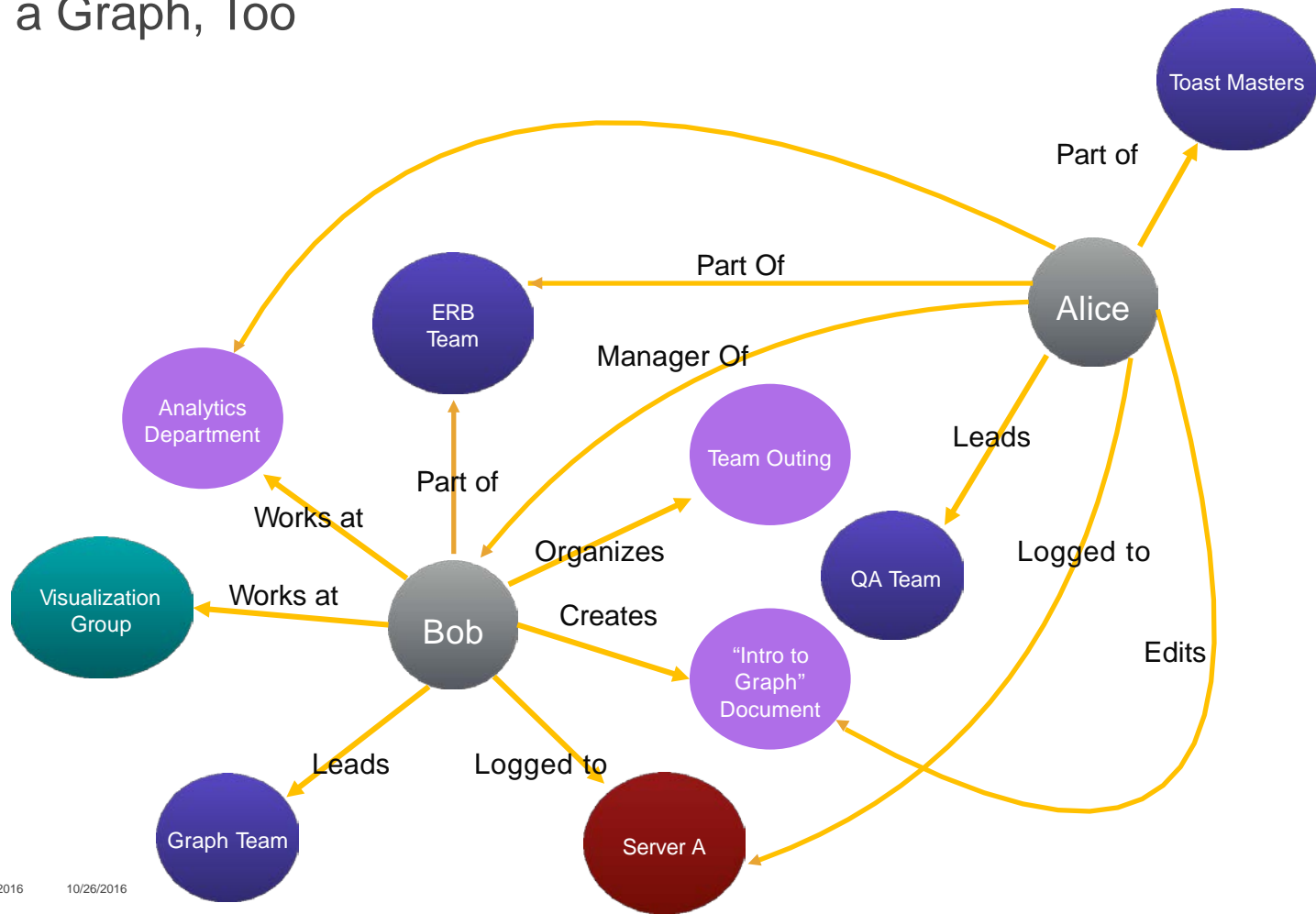


This is a Graph





## And This is a Graph, Too



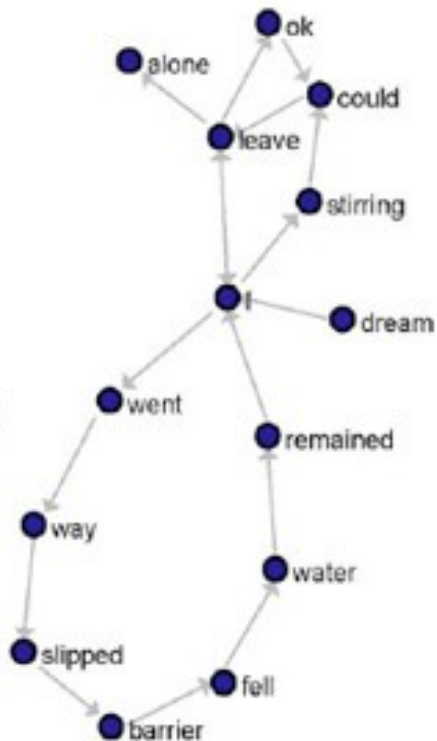


# Diagnosing Psychosis With Word Analysis

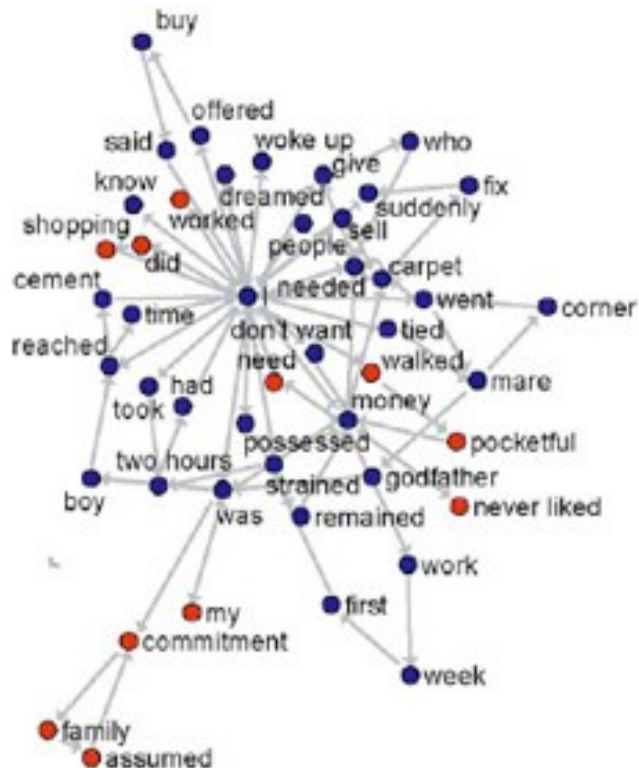
**Schizophrenia**



**Control**



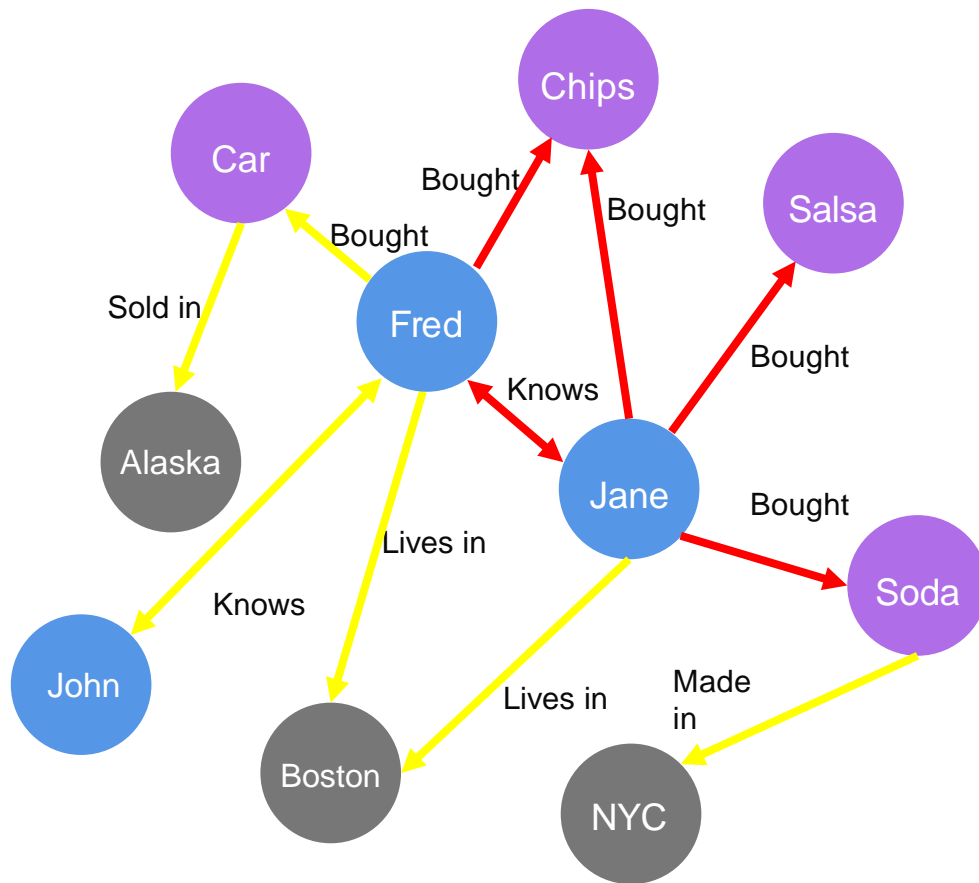
**Mania**





# Recommendations

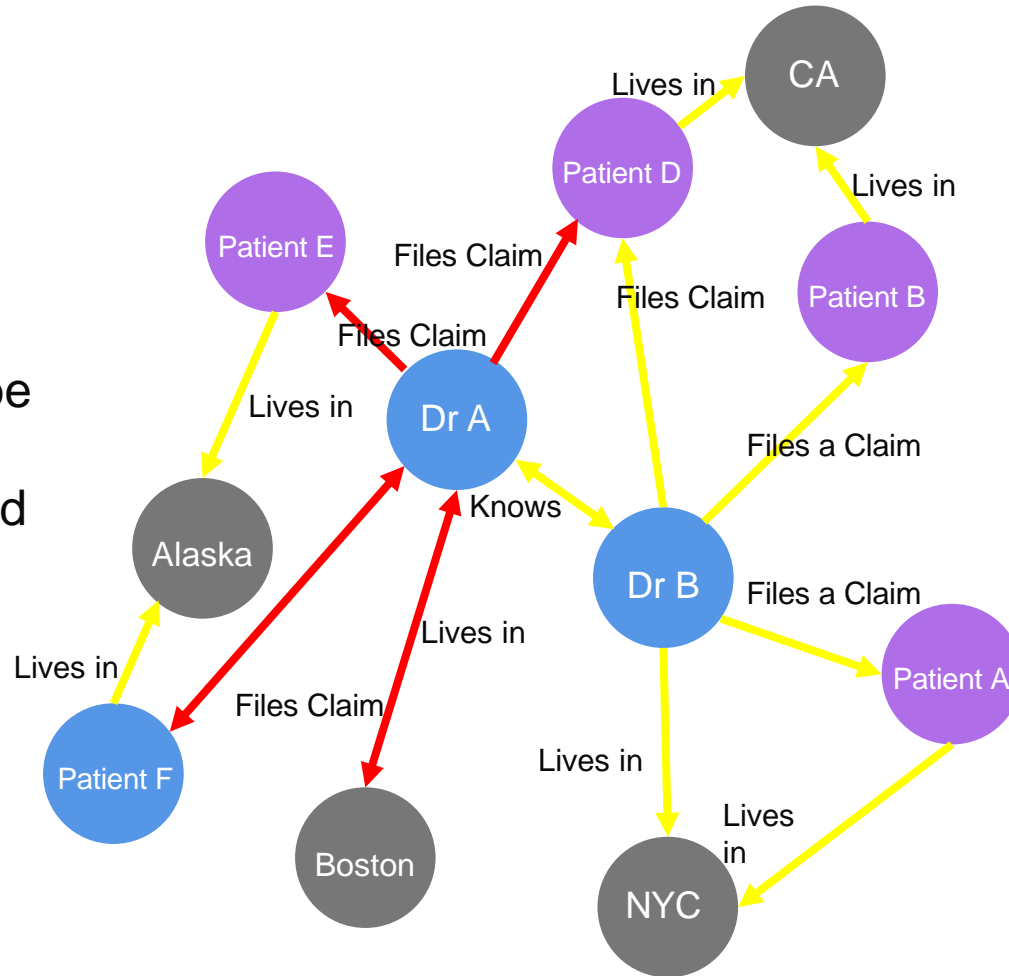
Suggest to Fred that he might like some salsa or some soda



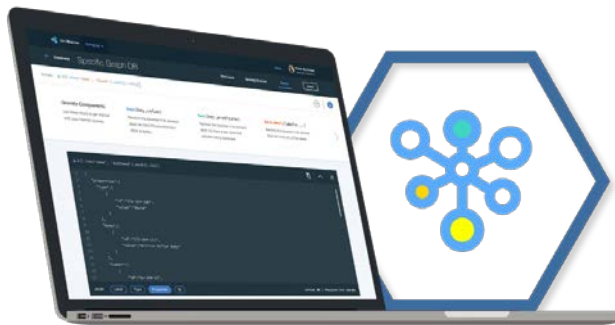


# Fraud Detection

Why would a Doctor that lives in Boston be filing claims against patients in Alaska and California?



# IBM Graph



Highly available



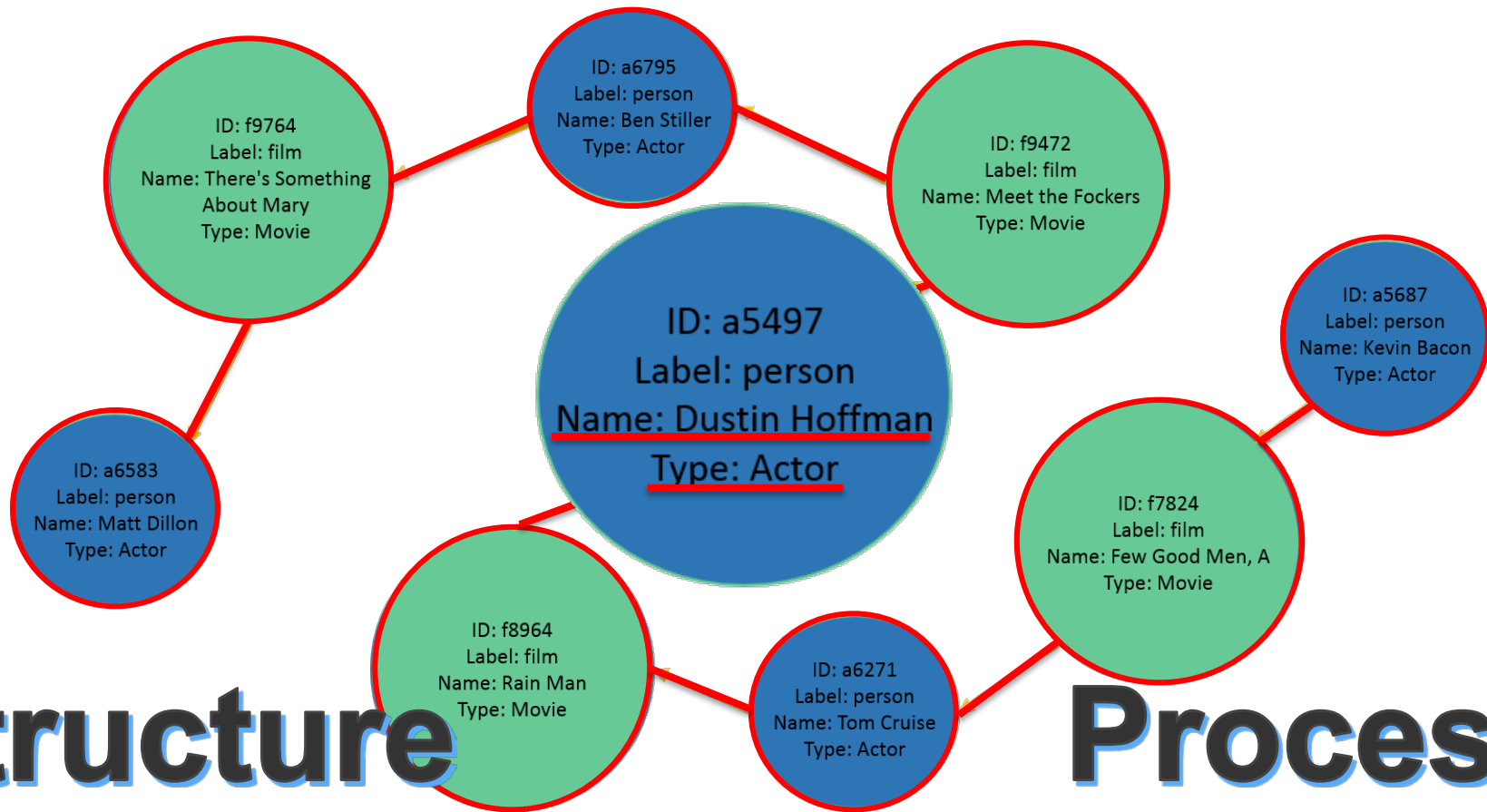
Managed 24/7



Scales seamlessly

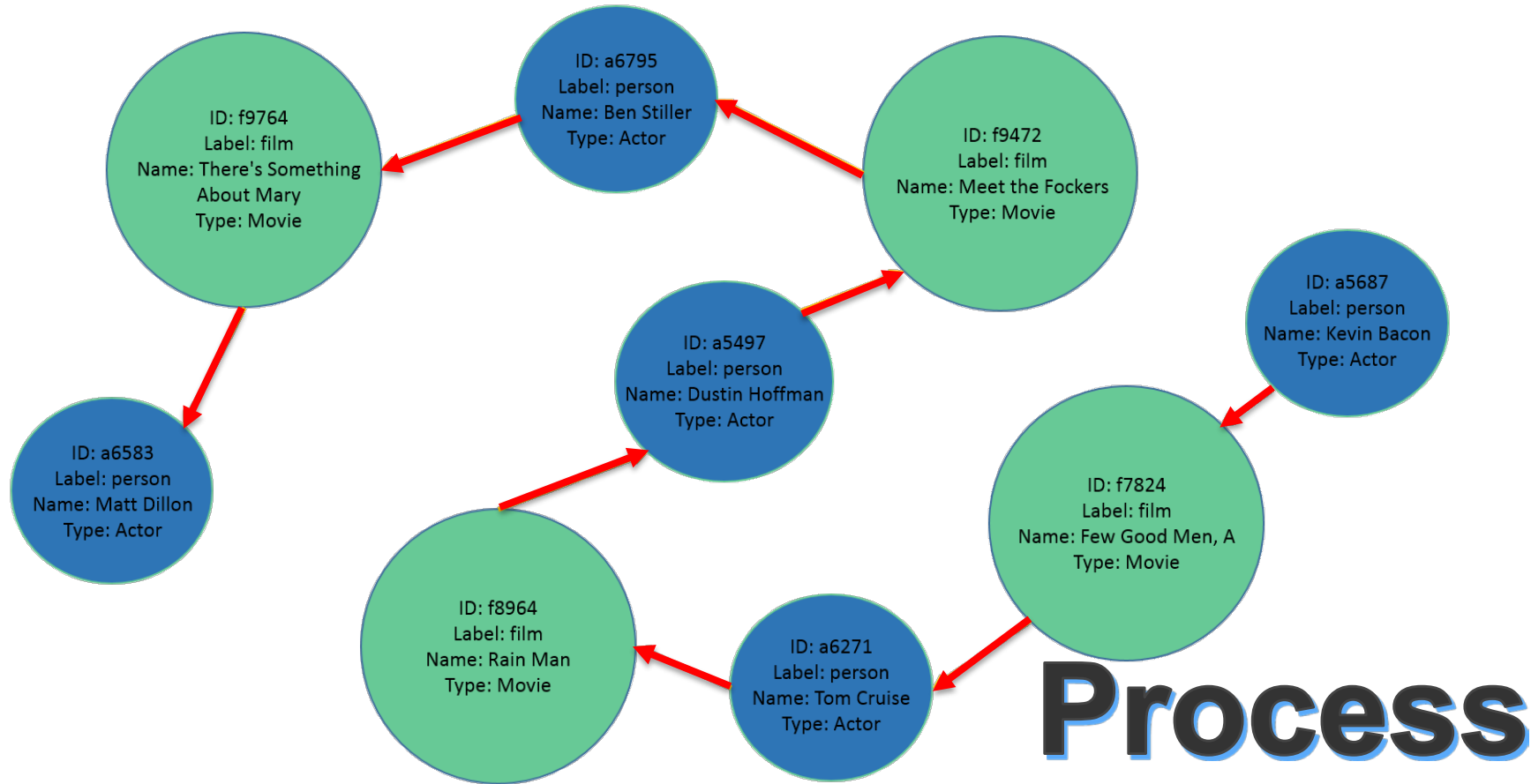


# Property Graphs and Traversals





# Property Graphs and Traversals





Apache TinkerPop™ is a graph computing framework for both graph databases (OLTP) and graph analytics systems (OLAP).



Gremlin is a graph traversal language and virtual machine developed by Apache TinkerPop of the Apache Software Foundation.

Gremlin is based on Groovy and uses the same syntax.

```
graph.traversal().V().has('name','Alaa').outE('posts').values('comment')
```



# Surveys/uGifting

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After completing the overall conference survey, Clients and IBM Business Partners\* will be provided a \$20 e-voucher that can be applied toward the purchase of an item of your choice at the IBM Logo Store or the IBM Bookstore, or you can choose to donate those funds to charity.

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Thank You

Start the lab at [ibm.biz/wow-graph-lab](http://ibm.biz/wow-graph-lab)

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