Why do we need graph processing?
- Understand, Manage, Operate
- Social Networks, Gaming, Bioinformatics, Logistics, Maps

The problem
- Now
- Future

Graphitti, our solution
Use all parallelism in the infrastructure, at all scales. It’s that simple.

- Standard data format
  - Share traces with the community
  - Use extensions for specific modeling aspects
  - Text-based, easy to parse for custom tasks
  - Additional SQL-compatible data format (GWF-SQLite)

- Standard API and multiple back-ends
  - Provide ready-to-use tools to the community
  - Ease-of-use

- Infrastructure-, Algorithm-, and Data-dependent
  - Towards best performance and minimal effort
  - Core computer science research: scheduling, monitoring, benchmarking, workload modeling, etc.
  - Co-design: data+algorithm+machine

Applications
- PageRank, other reputation
- Game Analytics
- Community Management
- Person management
- Link-formation prediction

Algorithms
- Traversals: BFS, DFS, etc.
- All-source shortest path
- Logistics: Maxflow, etc.
- Community detection
- Betweenness centrality

Common Data Format

Common API

Multiple Back-ends

Timeline

2011
Mar
Dec
2012
Mar
Dec
2014
Mar

idea

group

online

Graphitti working

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