

# World View: Understanding Dependencies in Global Development Projects

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# Dependencies

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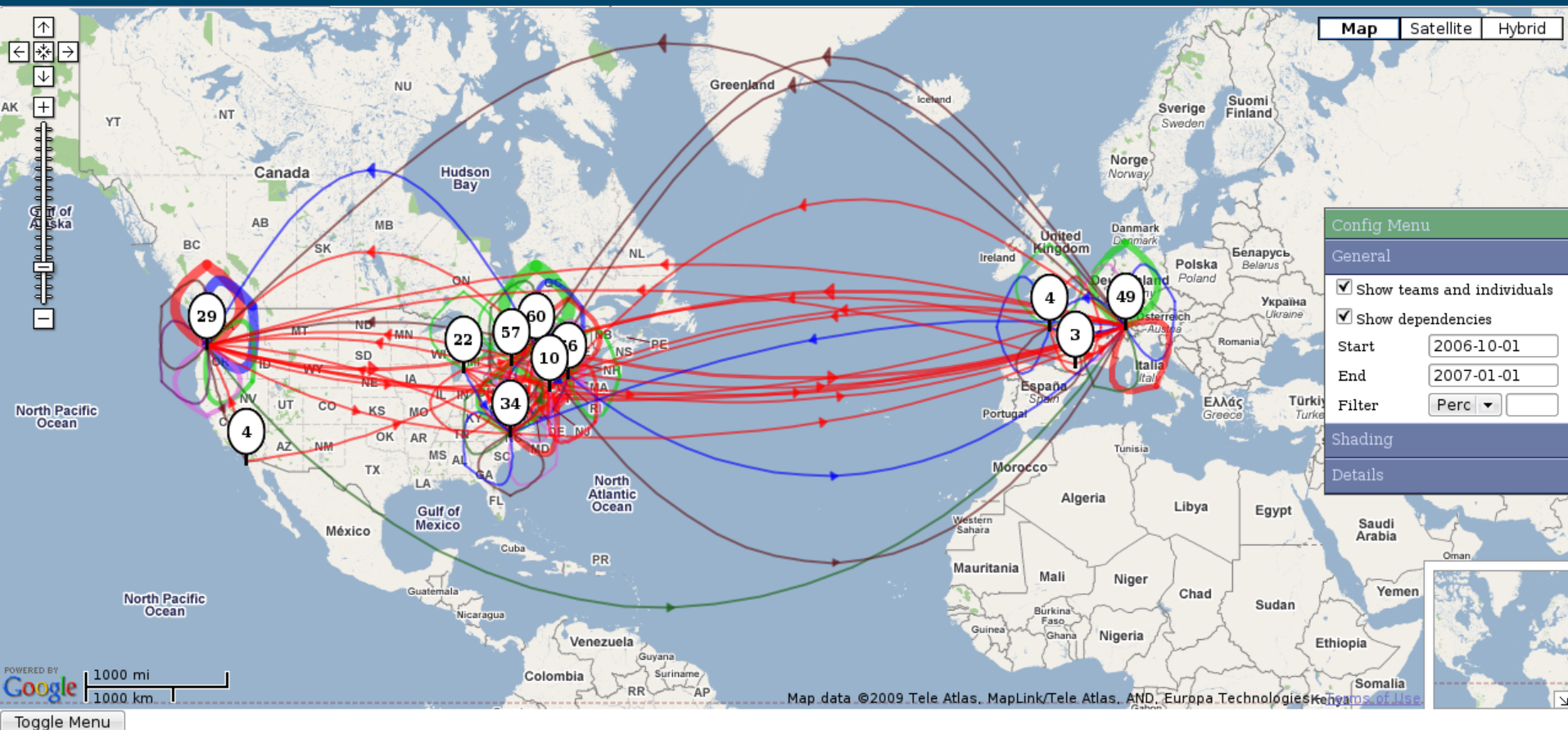
- Dependencies arise in any software development project
  - social dependencies among people
  - technical dependencies among artifacts
- Tasks arise from, build upon, and update dependencies
- When social and technical dependencies optimally align, an organization is in a state of congruence

# Distribution

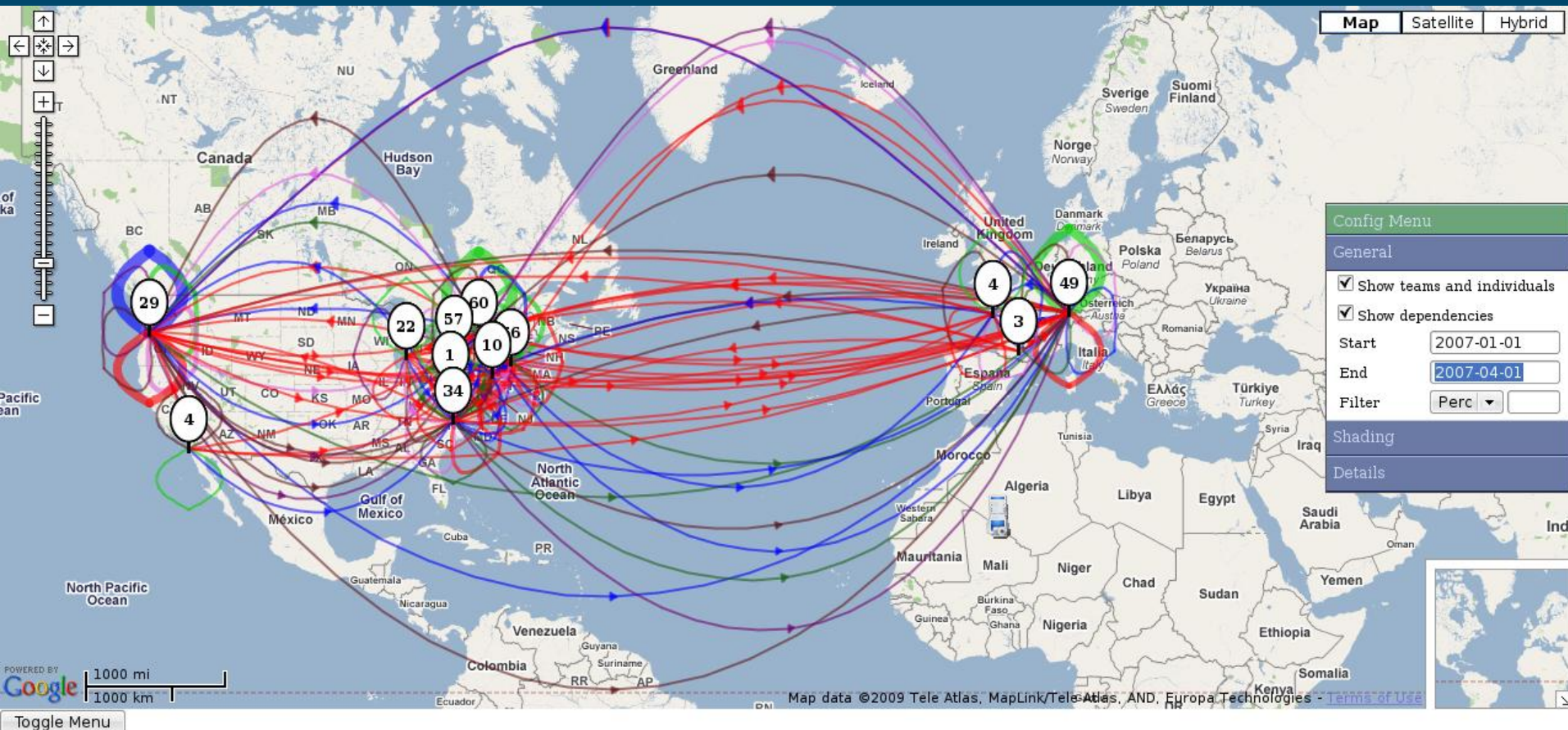
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- Distribution dramatically interferes with our ability to achieve congruence, particularly over time
- To date, however, we know little about exactly how social and technical dependencies arise, change, and disappear in a distributed setting
- We are currently engaged in building World View, a novel visualization of dependencies, and mining the Jazz repository as an example project

# World View, 2006 Q4

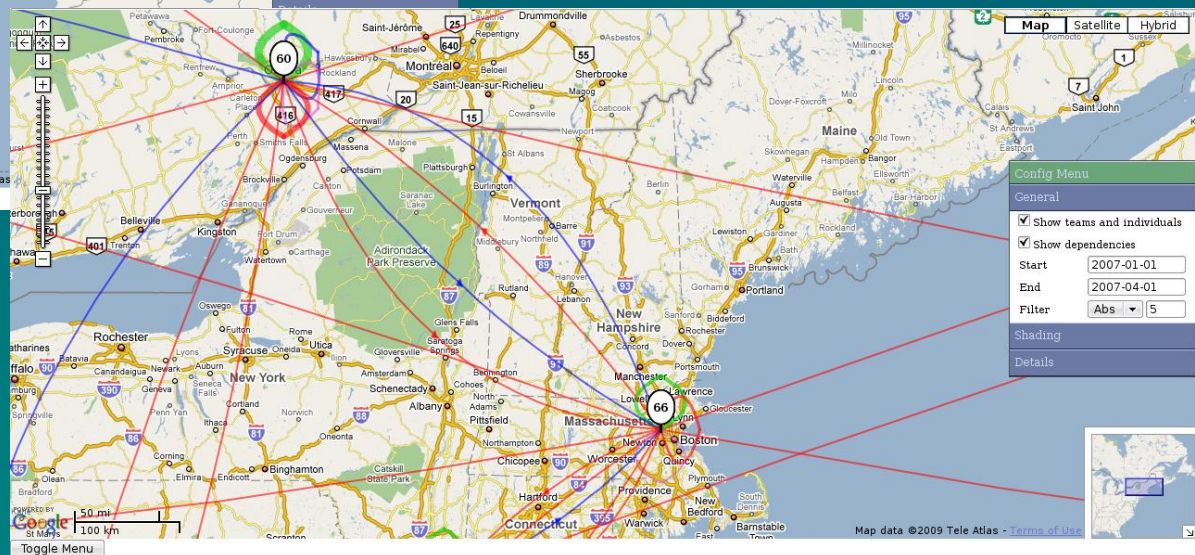
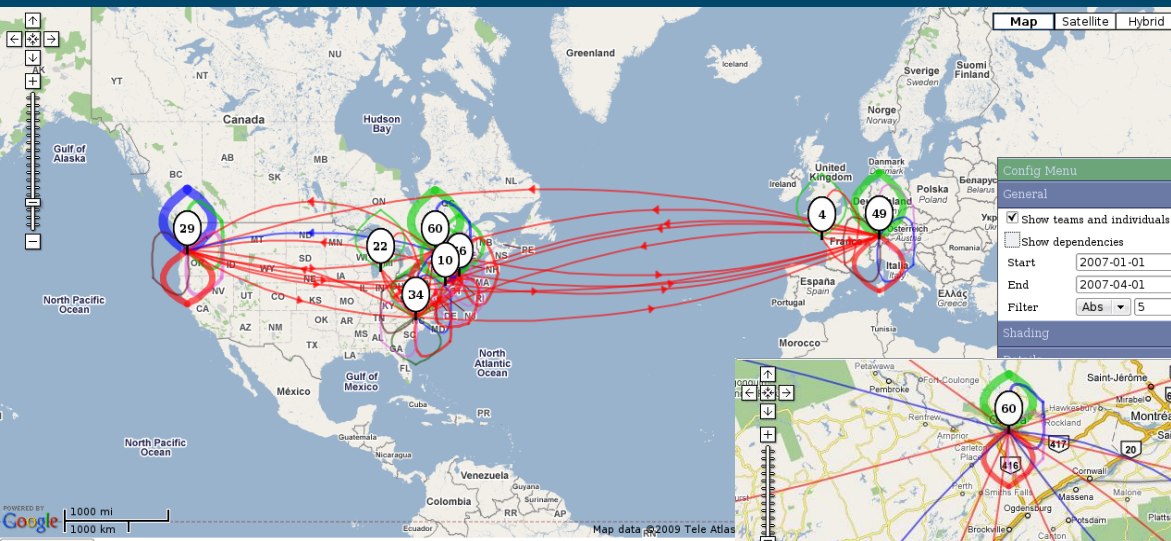


# World View, 2007 Q1





# World View, 2007 Q1, Filtering & Zooming



# Ongoing and Future Work

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- Technically, extend the tool to address additional kinds of dependencies
  - dependencies when code is edited by more than one team / individual
  - dependencies when code from one team / individual calls code from another team / individual
  - dependencies representing different kinds of work items
- Scientifically, use the tool to understand patterns of distributed software development, and particularly how distributed development influences congruence
- Practically, turn World View into a day-to-day project awareness tool