# Version Consistency: Journal Paper

## Experimental Setting

# Goal Of Experiments

- Effectiveness:
  - Our Approach is Safer than Tranquility
- Performance:
  - Our Approach better than Quiescence in terms of:
    - **Timeliness**
    - **Disruption**

# Effectiveness
# (1)Intuitive motivation

- Choosing an appropriate scenario to adopt throughout the paper.
  - It should replace our current example.
  - Simple enough to be easy to follow.
  - Critical enough to motivate the inapplicability of Tranquility in real scenario.
- Proposal:
  - CurrencyConverter Update:
    - Simple enough
    - Critical enough:
      - Possible loss of money both from the user and system side.

# Effectiveness
# (2) Concrete Measures

- Failure/Inconsistency rate:
  - Considering the type of transactions:
    - r1= #Inconsistent types of transactions/ # total types of transactions.
  - Considering the total number of (also repeated) transactions:
    - r2= #Inconsistent of transactions/ # total transactions.
    - We may find types of distributed transactions that are used more frequently w.r.t. to others
    - There is the risk we may obtain worse results than r1
    - Looking for logs of real distributed applications?

# Performance: Timeliness

- Using the Travel-Sample
- Possible Experiments:
  - Specific update: best case/worst case
  - Random Update
  - Average Case
  - Both for random and average case the number of component to update is too limited to have some sort of statistical significance.
    - For this kind of experiments I think that our simulator is still more effective.

# Performance of Disruption

- I agree that Loss of Working time is difficult to measure.
- Proposal: response time.
  - Quiescence in that case will be very slow for the passivation of all dependent components.
  - Our CV strategy will considerably improve the response time.

# Response time: experimental settings

- Parameters:
  - Load of requests: **l**
  - Network Delay: **d**
  - Service Time of each component: **s**
- Settings
  - Different l, Fixed d,s
    - Jmeter?
  - Different d, Fixed l,s
  - Different s, Fixed l,d
    - High service time will be an advantage for our approach
    - It may be difficult to convince the extra value of simulated service time in ConUp w.r.t. to the simulator.i

# Performance of the framework

- ConUp Overhead:
  - Time
  - Number of Messages?
- What to measure:
  - On-demand vs Normal Algorithm
  - Set up and clean-up steps
  - Average time to replace a component
    - Strictly depends  on Tuscany