

Specification and Implementation of Replicated List

— The Jupiter Protocol Revisited

(Brief Announcement at PODC'2018)

Hengfeng Wei, Yu Huang, Jian Lu

Nanjing University

July 24, 2018

Jupiter

S

C_1

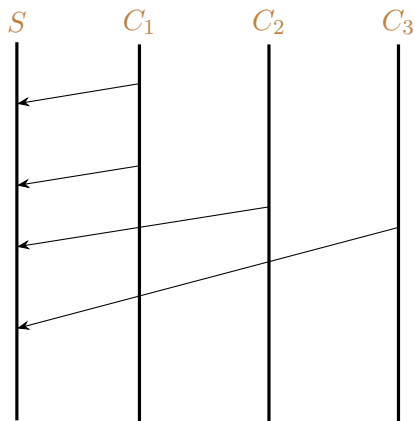
C_2

C_3



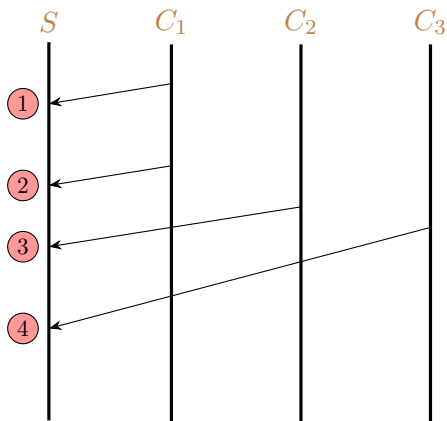
System model of Jupiter:

- ▶ client-server architecture



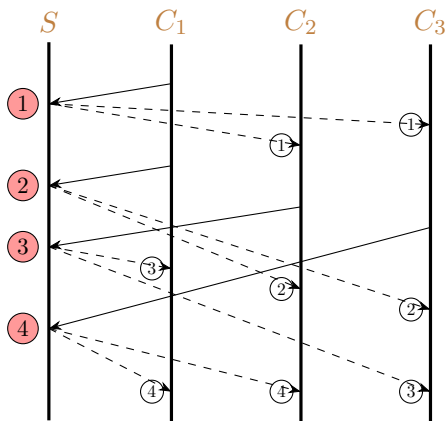
System model of Jupiter:

- ▶ client-server architecture
- ▶ client $\xrightarrow{\text{FIFO}}$ server



System model of Jupiter:

- ▶ client-server architecture
- ▶ client $\xrightarrow{\text{FIFO}}$ server
- ▶ totally ordered at the server

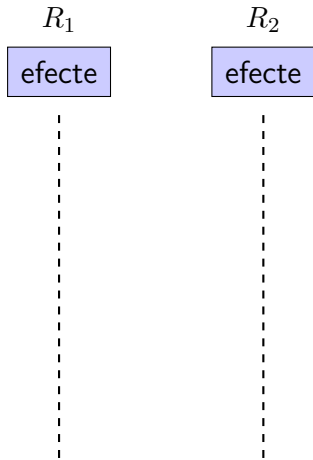


System model of Jupiter:

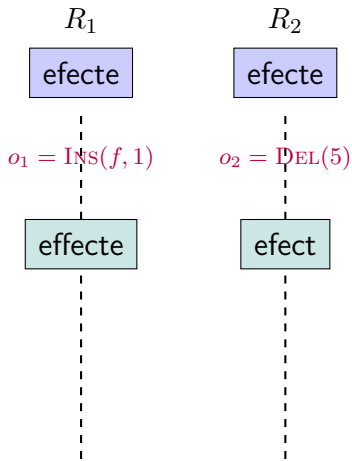
- ▶ client-server architecture
- ▶ client $\xrightarrow{\text{FIFO}}$ server
- ▶ totally ordered at the server
- ▶ server $\xrightarrow{\text{FIFO}}$ client

OT (Operational Transformation) []

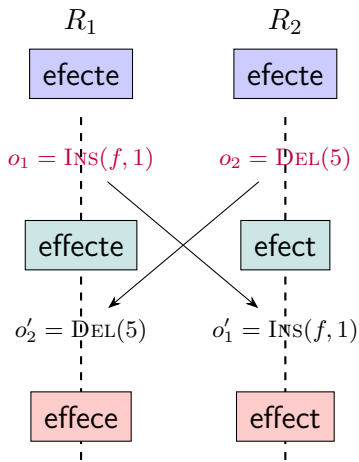
OT (Operational Transformation) []



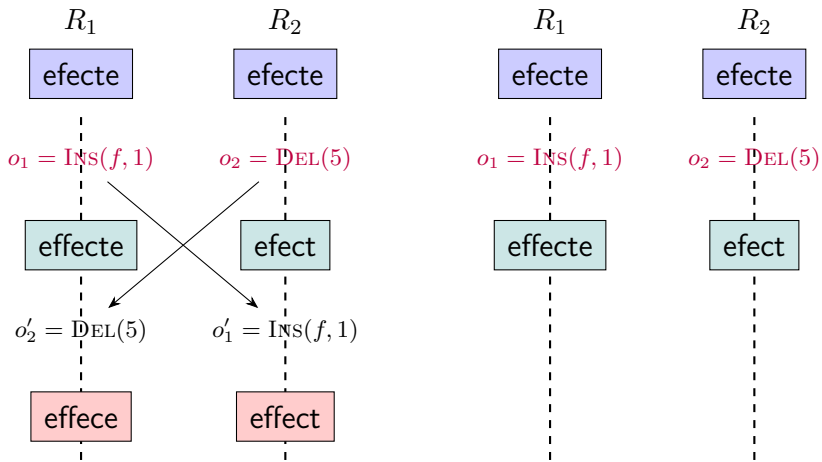
OT (Operational Transformation) []



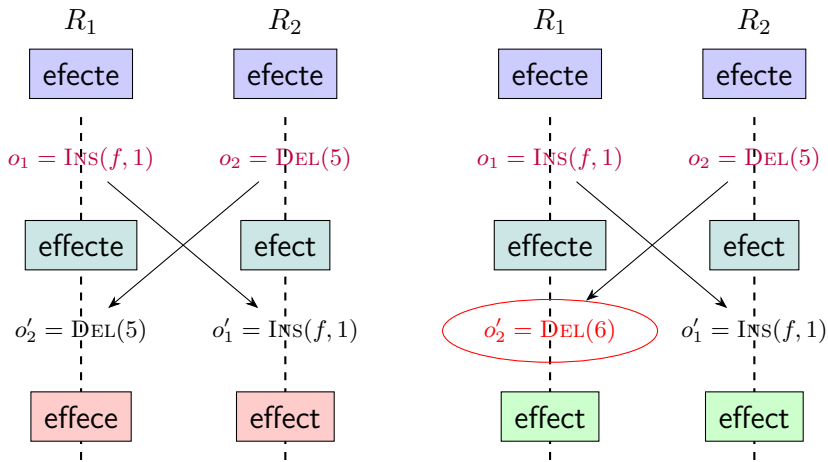
OT (Operational Transformation) []



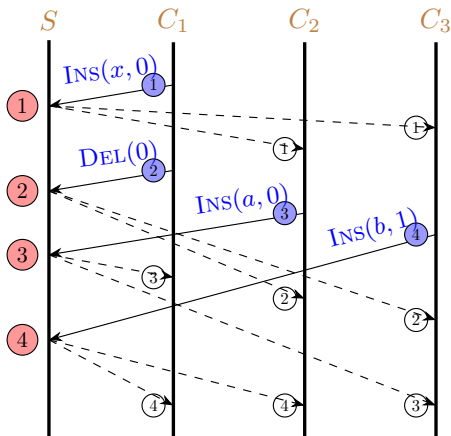
OT (Operational Transformation) []

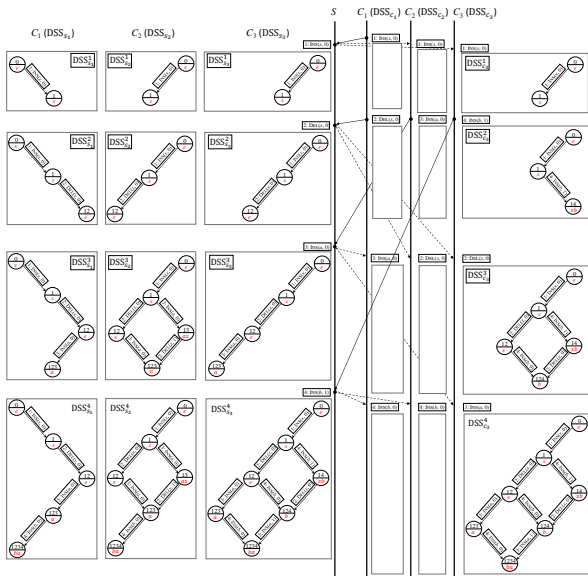


OT (Operational Transformation) []



Jupiter: How and when to perform OTs?





example execution

Thank
You!



Office 302

Mailbox: H016

hfwei@nju.edu.cn