

Distributed Collaboration - Assignment 5: Centralized Operation Transformation

Date Assigned: Nov 14, 2012

Completion Date: 11 am Dec 3, 2012 (No late submission)

In this assignment, implement the centralized operation transformation algorithm discussed in class to overcome the consistency problems that arise when multiple users insert elements in a list. Your OT algorithm must clean up the buffer when entries are no longer needed. In addition, use this algorithm in your IM project to ensure that the message list and topic string is consistently ordered at all sites. Finally, demonstrate the correctness and steps of your algorithm using example scenarios – in particular the examples given in class, including the 3-user scenarios. In your demonstration, you should show the operands and result of each call to the operation transformation function and the state of each local buffer and site time stamp after the processing of each outgoing and incoming message. You can follow the implementation architecture given in slides 167-175 in Consistency.pptx. You can delay messages either by adding delays or using the tracer.

Submission

Demonstrate all aspects of your project in class on Dec 3. Those who cannot finish the demos Dec 3 will give them on Dec 5. However, you should be prepared to give the demo on Dec 3. There is enough time for you to finish by this deadline.

[Also please email me the zipper source code \(no binaries please\) of your project.](#)