S38.3600As2_DesignChart

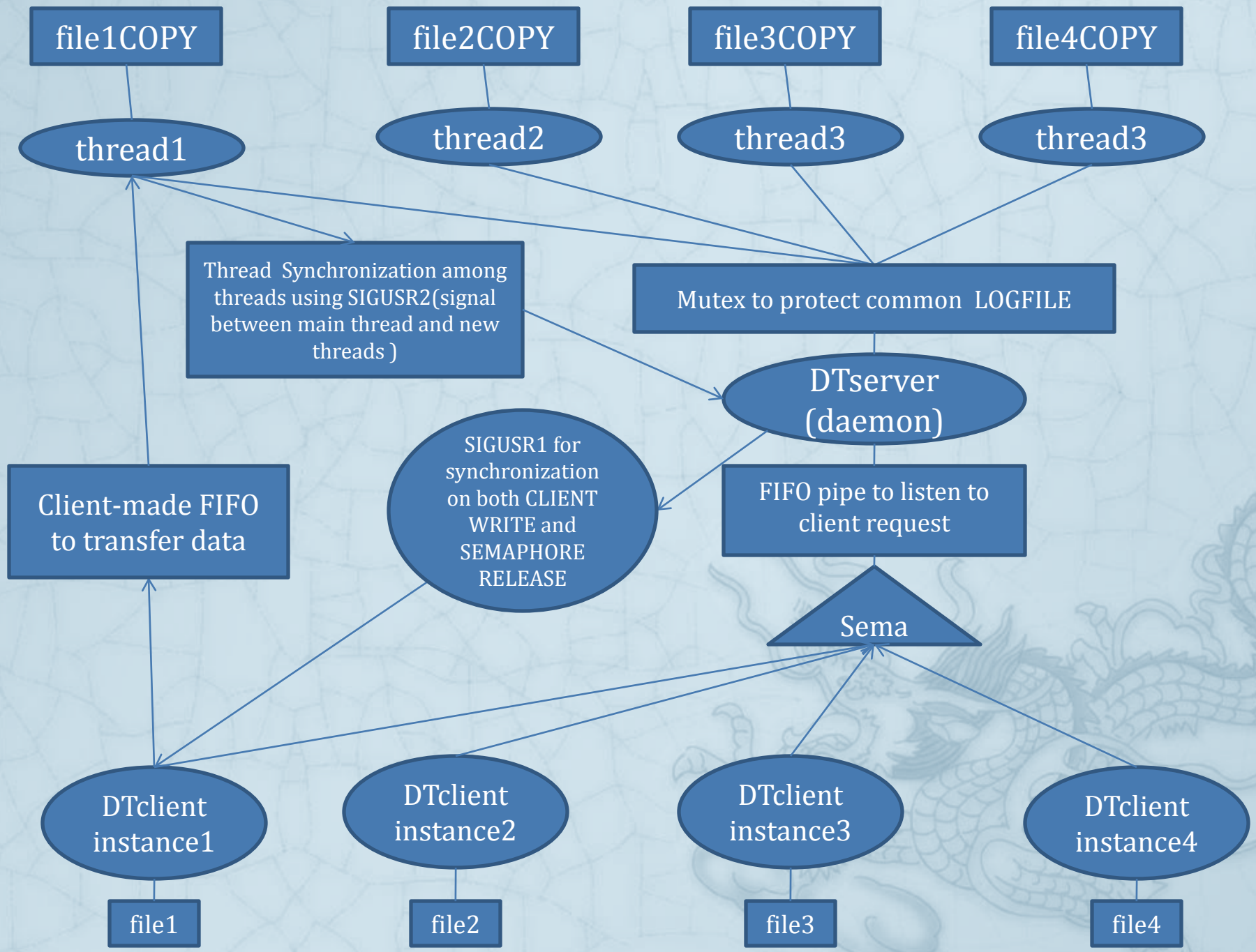
YunfengHe_244536

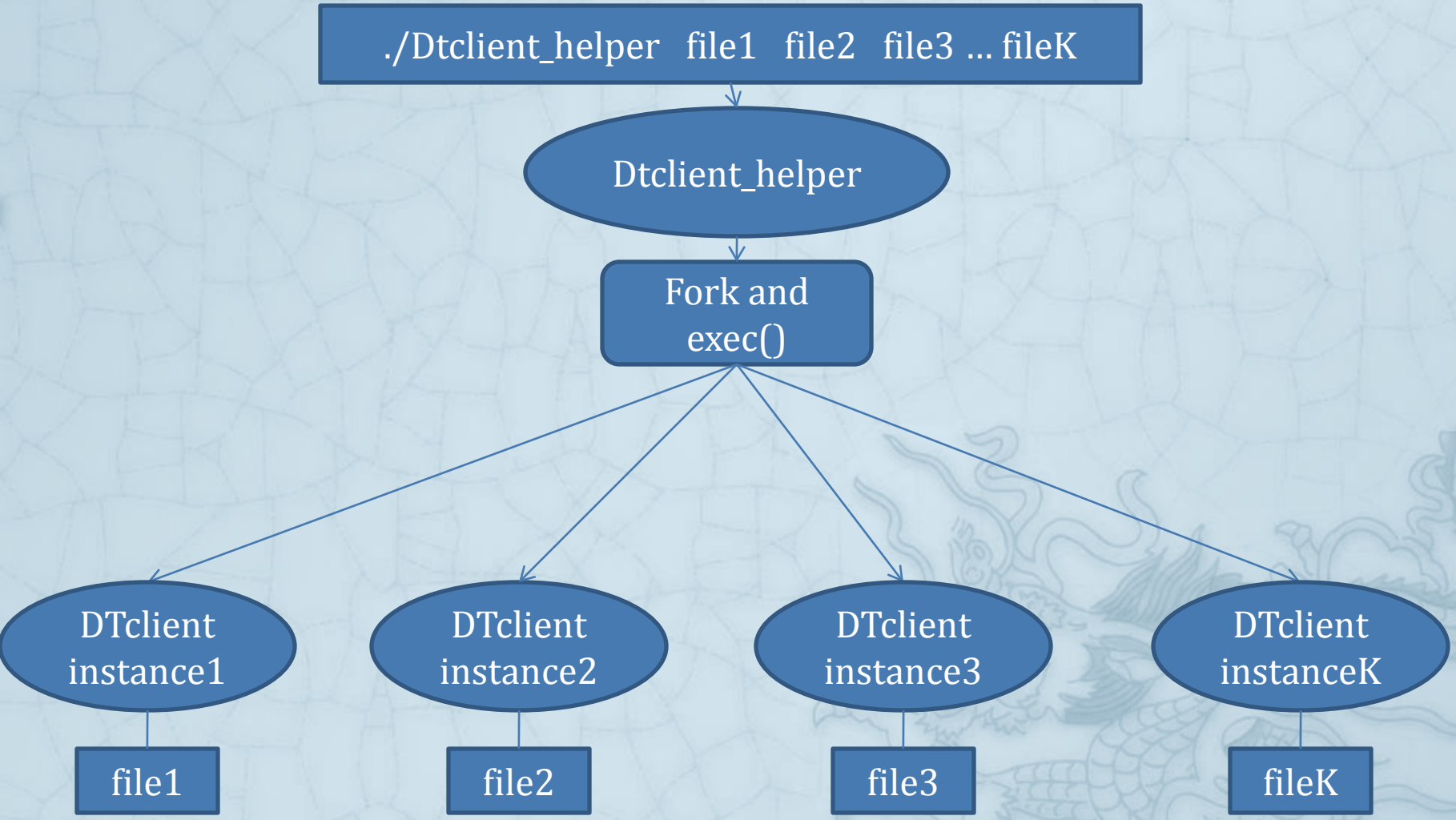
Topic2 Data Transfer

Key Elements:
FIFO(inter-program com);
Semaphore(inter-process com : access control);
Thread creation(parallel tasks);
Thread synchronization(Mutex and signal used);
Daemon;

Also employs:
Select( )'s build-in timer(Server timeout);
Signal handling(for server-client synchronization).
Code replacement in Dtclient_helper(saving test misery)

Dec,13th,2012


file1COPY
file2COPY
file3COPY
file4COPY
thread1
thread2
thread3
thread3
Thread Synchronization among threads using SIGUSR2(signal between main thread and new threads)
Mutex to protect common LOGFILE
DTserver (daemon)
SIGUSR1 for synchronization on both CLIENT WRITE and SEMAPHORE RELEASE
Client-made FIFO to transfer data
FIFO pipe to listen to client request
Sema
DTclient instance1
DTclient instance2
DTclient instance3
DTclient instance4
file1
file2
file3
file4


./Dtclient_helper file1 file2 file3 … fileK
Dtclient_helper
Fork and exec()
DTclient instance1
DTclient instance2
DTclient instance3
DTclient instanceK
file1
file2
file3
fileK