Outline for January 31, 2008

1. Example instantiation of the model: get-read, give-read commands in Multics
2. Tranquility
   a. Strong tranquility
   b. Weak tranquility
3. System Z and the controversy
4. Biba
   a. Low-water-mark policy
   b. Ring policy
   c. Strict integrity
   d. LOCUS
5. Clark-Wilson Model
   a. Theme: military model does not provide enough controls for commercial fraud, etc. because it does not cover the right aspects of integrity
   b. Data items: "Constrained Data Items" (CDI) to which the model applies, "Unconstrained Data Items" (UDIs) to which no integrity checks are applied, "Integrity Verification Procedures" (IVP) that verify conformance to the integrity specification when IVP is run, "Transaction Procedures" (TP) takes system from one well-formed state to another
6. Clark-Wilson Certification and Enforcement Rules

   C1. All IVPs must ensure that all CDIs are in a valid state when the IVP is run.

   C2. All TPs must be certified to be valid, and each TP is associated with a set of CDIs it is authorized to manipulate.

   E1. The system must maintain these lists and must ensure only those TPs manipulate those CDIs.

   E2. The system must maintain a list of User IDs, TP, and CDIs that that TP can manipulate on behalf of that user, and must ensure only those executions are performed.