

Differences between Tree (or Graph) Protocol and Multiple Granularity

Tree (or Graph) Protocol	Multiple Granularity
1. Initial locking of data item is done at random on required data item	1. Initial locking is done with root data node
2. Only one mode of lock is present i.e. exclusive mode of lock	2. Five modes of locks are present. They are: shared (S), Exclusive (X), Intension Shared (IS), Intension Exclusive (IX) and Shared Intension Exclusive (SIX)
3. Prior information of mode of lock over subsequent data modes is not available	3. Prior information of mode of lock over subsequent data modes is available using intension modes
4. If a transaction wants to lock a data item then its parent node must be locked first	4. (a) If a transaction wants to lock a data node in S or IS mode then its parent data must be locked either in IS or IX mode (b) If a transaction wants to lock a data node in X, IX or SIX then its parent data node must be locked in IX or SIX mode
5. Unlocking of data nodes is done in any order	5. Unlocking of a data node is done if and only if its children data nodes are unlocked
6. Locking of data nodes doesn't follow any approach	6. Locking of data nodes follow top down approach
7. Unlocking of data nodes doesn't follow any approach	7. Unlocking of data nodes follow bottom up approach
8. Unnecessary locking of data nodes exists	8. Unnecessary locking of data nodes doesn't exist
9. Prolonged Starvation exists	9. Prolonged starvation doesn't exist