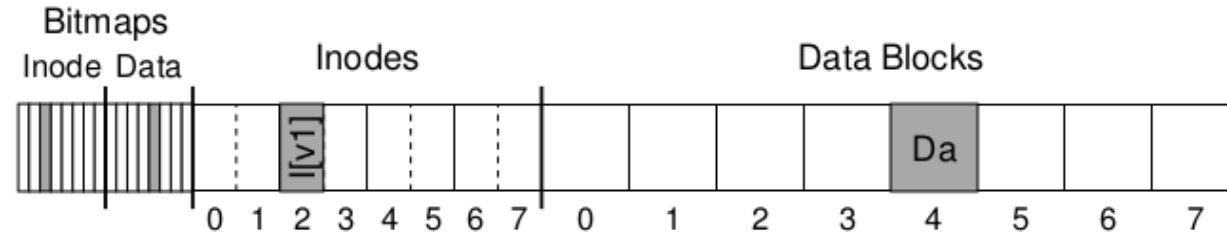
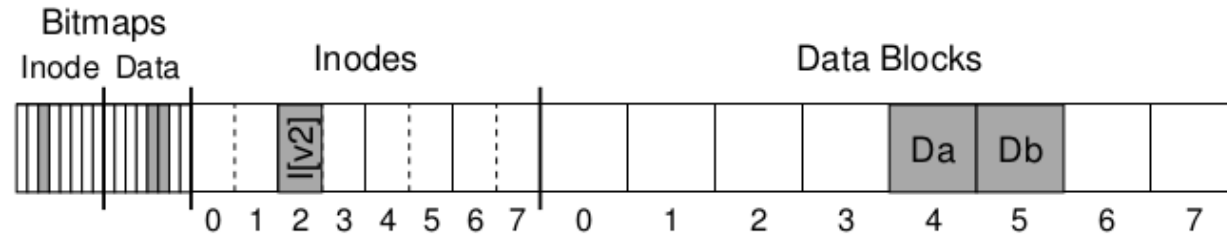


1. Crash Consistency

Initial file system, one file, one block: B[v1], I[v1], Da



Data block Db appended, requires 3 writes: B[v2], I[v2], Db



Crash Scenarios:

1. B[v2] written, but not I[v2] and Db
2. I[v2] written, but not B[v2] and Db
3. Db written, but not B[v2] and I[v2]
4. B[v2] and I[v2] written, but not Db
5. I[v2] and Db written, but not B[v2]
6. B[v2] and Db written, but not I[v2]

Which leave file system inconsistent?

How to fix?