The navigator makes use of four "utility" navigation classes tightly coupled to G4NavigationHistory, which maintains the "stack" of compounded transformations and volume/replication-number information

G4Navigator
(from navigation)

- ◆ <<const>> GetWorldVolume()
- ◆ <<virtual>> ComputeSafety()
- ◆ <<virtual>> ComputeStep()
- ◆ <<virtual>> CreateTouchableHistoryHandle()
- ◆ <<virtual>> GetLocalExitNormal()
- ◆ <<virtual>> LocateGlobalPointAndUpdateTouc...
- ◆ <<virtual>> LocateGlobalPointWithinVolume()
- ◆ <<virtual>> ResetHierarchyAndLocate()

G4NavigationHistory

- ◆ BackLevel()
- ◆ <<const>> GetDepth()
- ◆ <<const>> GetTopReplica...
- ◆ <<const>> GetTopTransfo...
- ◆ <<const>> GetTopVolume()
- ◆ <<const>> GetTopVolumeT...
- ◆ NewLevel()

-fHistory

G4TransportationManager
(from navigation)

- ◆ <<const>> GetFieldManager()
- ◆ <<const>> GetNavigatorFo...
- ◆ <<const>> GetPropagatorI...
- ◆ <<static>> GetTransporta...

-fNavigatorForTracking

-fNavigator

-fPropagatorInField

G4PropagatorInField
(from navigation)

- ◆ ComputeStep()
- ◆ <<const>> GetChordFi...
- ◆ <<const>> GetDeltaIn...

G4NormalNavigation
(from navigation)

- ◆ ComputeSafe...
- ◆ ComputeStep()
- ◆ LevelLocate()

-fnormalNav

-freplicaNav

-fvoxelNav

-fparamNav

G4ReplicaNavigation
(from navigation)

- ◆ <<const>> BackLocate()
- ◆ ComputeSafety()
- ◆ ComputeStep()
- ◆ <<const>> ComputeTrans...
- ◆ <<const>> DistanceToOut()
- ◆ <<const>> Inside()
- ◆ LevelLocate()

G4VoxelNavigation
(from navigation)

- ◆ <<virtual>> Comp...
- ◆ <<virtual>> Comp...
- ◆ <<virtual>> Leve...
- ◆ VoxelLocate()

G4ParameterisedNavigation
(from navigation)

- ◆ ComputeSafety()
- ◆ ComputeStep()
- ◆ LevelLocate()
- ◆ ParamVoxelLocate()