DDBase: Double Differenced Carrier Phase Baseline Processor - Software Design

v. 1.02 5/31/05

main
[DDBase.cpp]

- GetCommandLine() [CommandLine.cpp]
- ValidateCmdInput() [CommandLine.cpp]
- Dump() [CommandLine.cpp]
- Configure(1) [Configure.cpp]
- ReadRawData() [ReadRawData.cpp]

[EditRawDataBuffers.cpp]
- EditRawDataBuffers() [EditRawDataBuffer.cpp]
- OutputRawDataBuffers() [EditRawDataBuffers.cpp]

- Configure(2) [Configure.cpp]
- EphemerisImprovement() [EphemerisImprovement.cpp]
- ClockModel() [ClockModel.cpp]
- Synchronization() [Synchronization.cpp]
- RecomputeFromEphemeris() Synchronization.cpp]
- Timetable() [Timetable.cpp]
- [DoubleDifference.cpp]
- EditDDs() EditDDs.cpp]
- Configure(3) [Configure.cpp]
- Estimation() [Estimation.cpp]

[ReadObsFiles.cpp]
- ReadAllObsHeaders() [ReadObs.cpp]
- ReadNextObs() [ReadObs.cpp]

ReadRawData()
[ReadRawData.cpp]
(for each epoch)
- FindEarliestTime() [ReadRawData.cpp]
- ComputeSolutionEpoch() [ReadRawData.cpp]

ProcessRawData()
[ProcessRawData.cpp]
(for each site/file)
- FillRawData() [ProcessRawData.cpp]
- GetEphemerisRange() [ProcessRawData.cpp]
- EditRawData() [ProcessRawData.cpp]
- ComputeRAIMSolution() [ComputeRAIMSolution.cpp]
- RAIMedit() [ComputeRAIMSolution.cpp]
- BufferRawData() [ProcessRawData.cpp]

[DataIO.cpp]
- OutputRawData()
- InputRawData()
- OutputDDData()
- InputDDData()
- OutputClockData()
- OutputRawDD()

Function calls (may be optional)

Expanded view

Pass to

ConfigureEstimation()
[Estimation.cpp]
- DefineStateVector() [Estimation.cpp]
- DefineLSProblem() [Estimation.cpp]

Estimation()
[Estimation.cpp]
(Iterative LS loop)
- EditDDdata() [Estimation.cpp]
- ModifyState() [Estimation.cpp]
- InitializeEstimator() [Estimation.cpp]
- aPrioriConstraints() [Estimation.cpp]

loop over data epochs
- FillDataVector() [Estimation.cpp]
- StochasticModel() [Estimation.cpp]
- EvaluateLSEquation() [Estimation.cpp]
- MeasurementUpdate() [Estimation.cpp]

- Solve() [Estimation.cpp]
- UpdateNominalState() [Estimation.cpp]
- OutputIterationResults() [Estimation.cpp]
- IterationControl() [Estimation.cpp]
- OutputFinalResults() [Estimation.cpp]

Notes: