GFZ‘s software EPOS in the context of reprocessing

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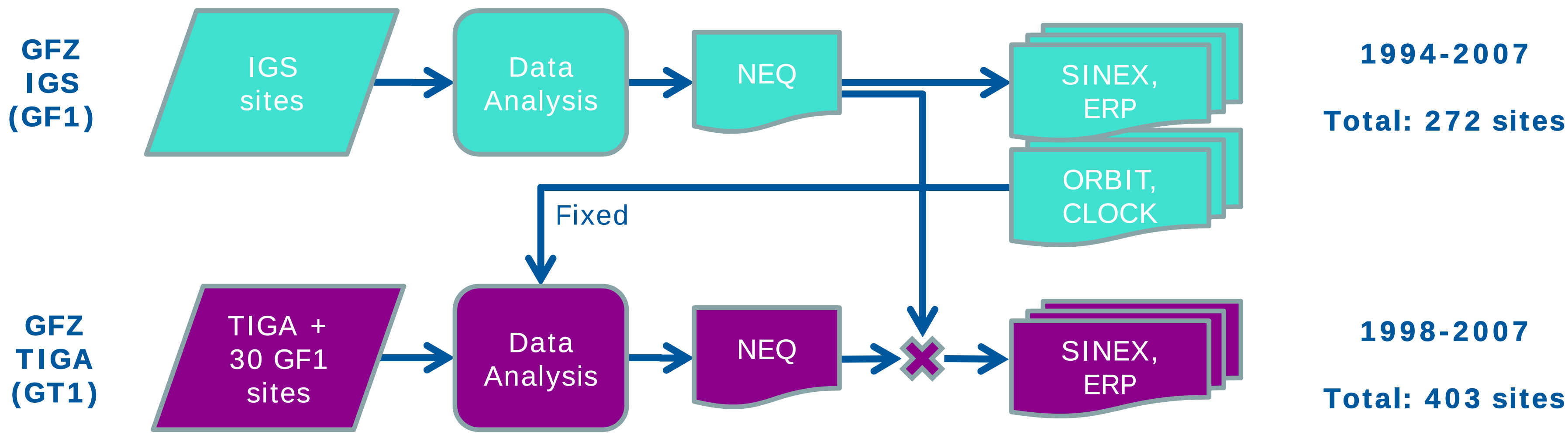
EPOS

Earth **P**arameter and **O**rbit determination **S**ystem

- Developed at GFZ since 1993
- Actual version: EPOS.P8
  - GPS, GLONASS, Galileo capable
  - Perfectly adapted for GFZ's Linux Compute Cluster
- Technique:
  - Undifferenced carrier phase and pseudo range observations
  - IGS models and latest IERS standards implemented
  - Least Square Adjustment
  - Fixing of 95% of ambiguities in global network solution
  - Analysis of >300 station in reasonable time w/o clustering

Processing Schemes

- Contribution of 2 Analysis Centres to Repro1:



Conclusions / Lessons learned

- Significant improvement in quality and homogeneity of delivered products w.r.t. operational solutions
  → Poster presentation *“GFZ Results of the first IGS Data Reprocessing Campaign”*

- Good software validation test

- Analysis of early 1990s needed more manual interactions
  - Determination of bad STA/SAT to be excluded → Common list over all ACs ?
  - IGS_WITH_FORMER.SNX apparently incomplete

- Duration of reprocessing @ Linux Compute Cluster:
  - Process 1 year of GPS data & inspect results: ~ 1.5 weeks
  - Total CPU time consumed (GF1) : ~ 673 days

Thank you for your attention