NGS RTN Guidelines:

PLANNING & DESIGN
Pre-plan!

Get er’ done!
Norm for RTK services, content

• Requirements to the RTK service provider with respect to:
  – Documentation of coverage area
  – Quality of coordinates for reference stations
  – Obtainable user accuracy, horizontal and vertical
  – Monitoring of accuracy and integrity
  – Distribution of warnings and error messages
  – Availability on weekdays at 98%
  – etc.
Best Practice Guidance Notes for Network RTK Surveying in Great Britain

An examination of commercial network RTK GPS services in Great Britain

www.tsa-uk.org.uk
Real Time (i.e. Available in Real-Time)
Planning & Design

- Pre-Planning
- Spacing
- Processing Center
Pre-Planning

Questions to ask before planning begins:

- Type of RTN
- Needs Analysis
- Cost-Benefit Analysis
- Performance Expectations
- Risks Assessment
- Operations Model
- Support Model
- Product Delivery Goals
- RTN Services
  - Single-Base
  - Network Corrections
  - Server-Side Processing
  - Static Files
Spacing & Geometry

- Theoretical Spacing
- Siting Limitations
- Phased Implementation
- Use of Existing/External Stations
- Fiducial Stations
- NGS CORS
- Multi-Constellation Stations
Processing Center

• Central Processing Center (CPC)
  • Host and Host Site
  • Servers and Arrays
  • Power & Environment
  • Archiving

• Communications
  • CORS to CPC
  • CPC to End-User
  • Redundancy

• Design for Operational Levels
  • Minimal (Tool Style)
  • Full (Utility Style)

• Maintenance and Support
• Network Integrity Monitoring
Doctor L2’s D.I.Y. RTN

• Secure a Big Pile of Funding
• Draw Overlapping Circles on a Map
• Stop by the Hardware Store
• Start Building Stations near the Center of them Circles
• Fly-tie some Coordinates from the Nearest Monument
• Press the Button

Or, make several vendors submit designs then choose one with the coolest graphics…

• Everything will be OK as long as you do not answer the phone…
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