



MWD STD Platform Basic

Free and Open Source Real-Time Survey
Management Platform



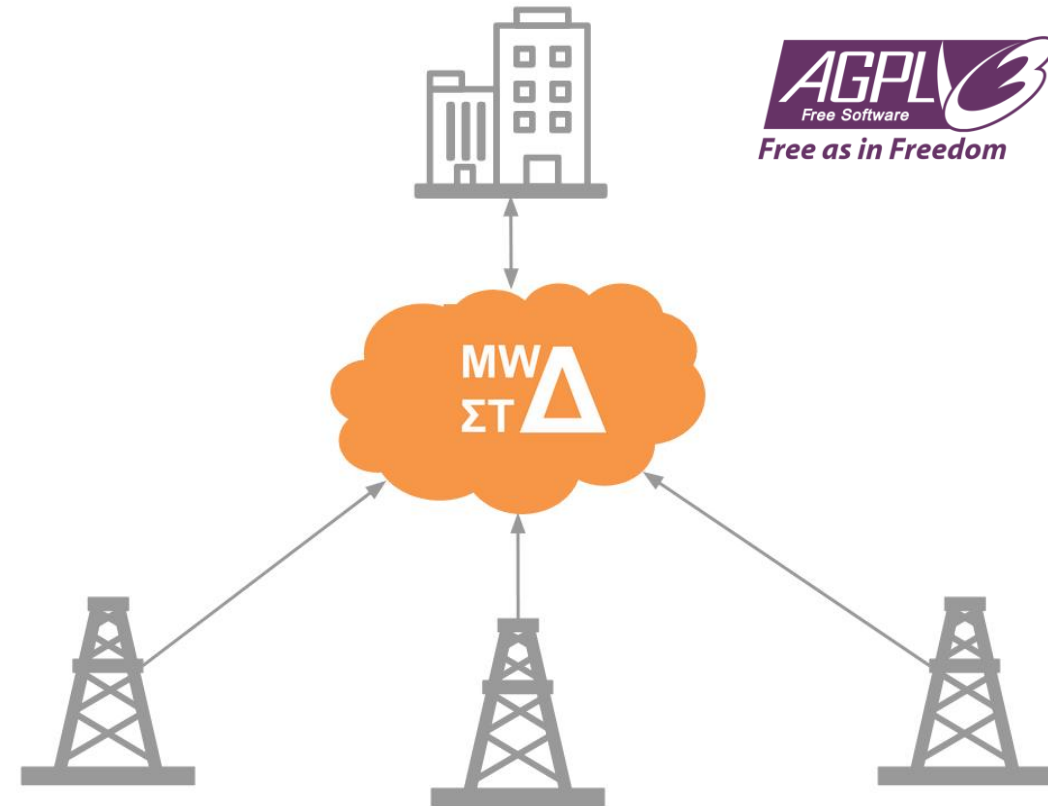
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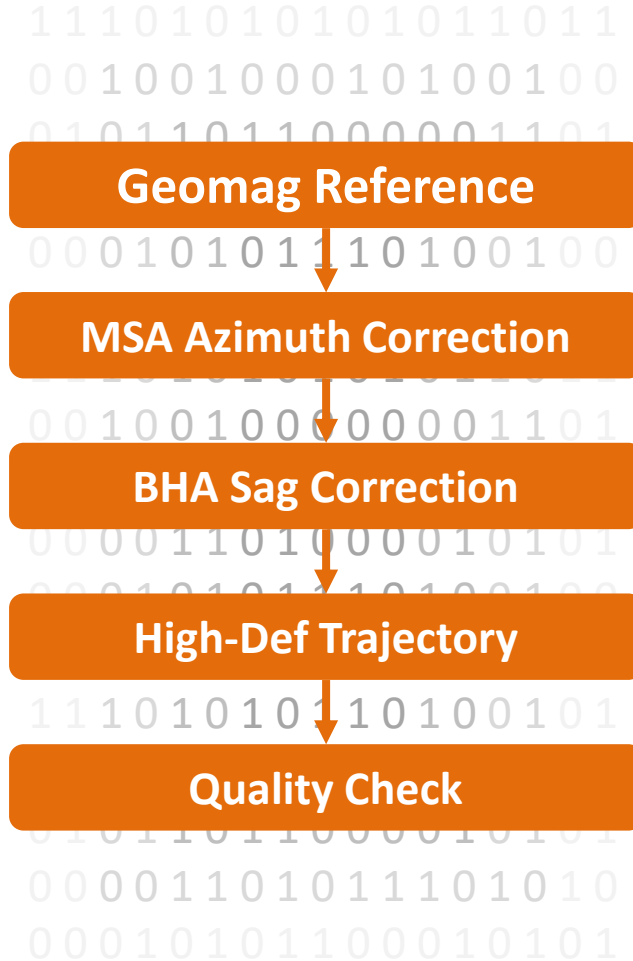
Overview

MWD STD Basic is:

- Automated survey management system
- Cloud-based multi-user design
- Automatic survey data uploading
- All MWD survey services in one **real-time workflow**:
 - Reference calculation
 - Multi-Station azimuth correction (MSA)
 - BHA sag correction
 - High-definition trajectory calculation
 - Quality check (QC)
- **Open source and completely free for personal and commercial use**



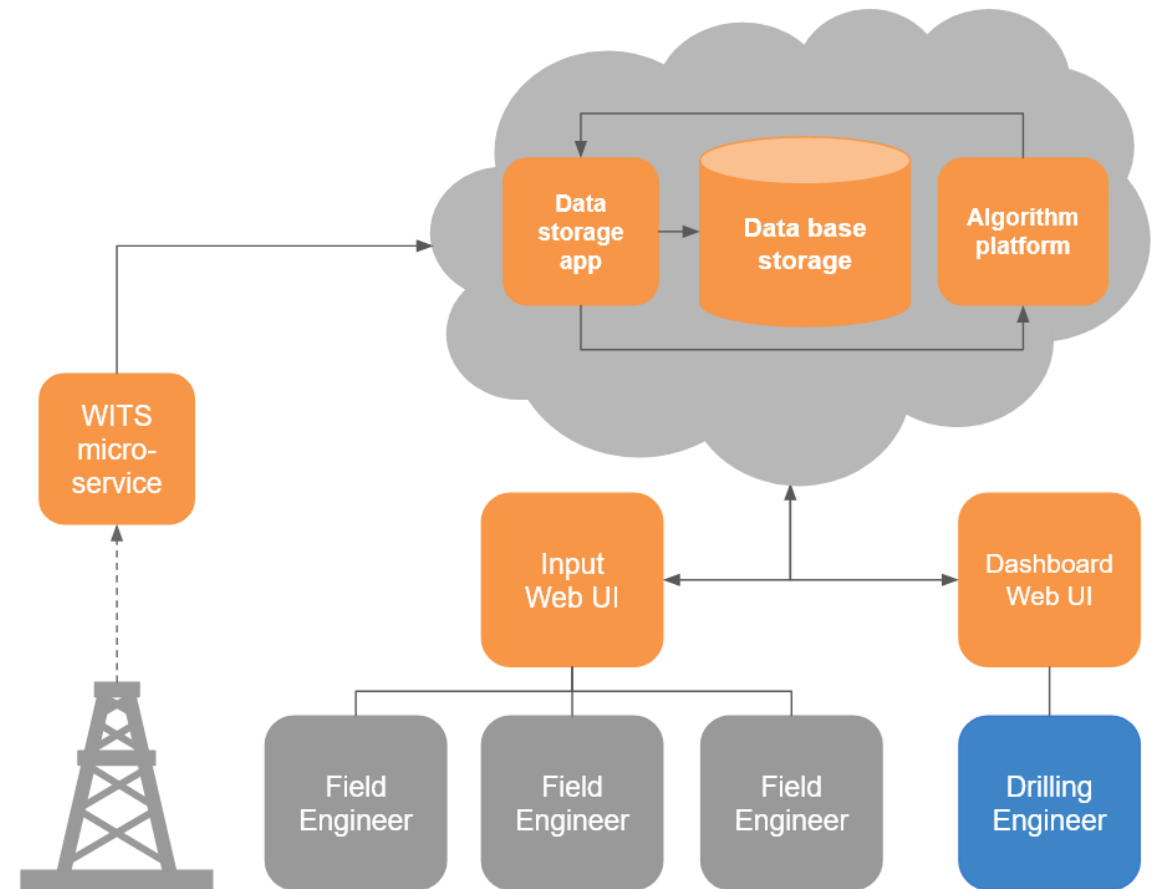
Services



- Reference calculation:
 - Gravity field: IGF80
 - Magnetic field: WMM2020
 - Grid convergence: WGS84
 - In-Field Referencing (IFR): external import
- Multi-Station Analysis (MSA):
 - Improved stability
 - Extended correction range
- BHA sag correction
- High-definition trajectory calculation
- Quality control (QC)

Architecture

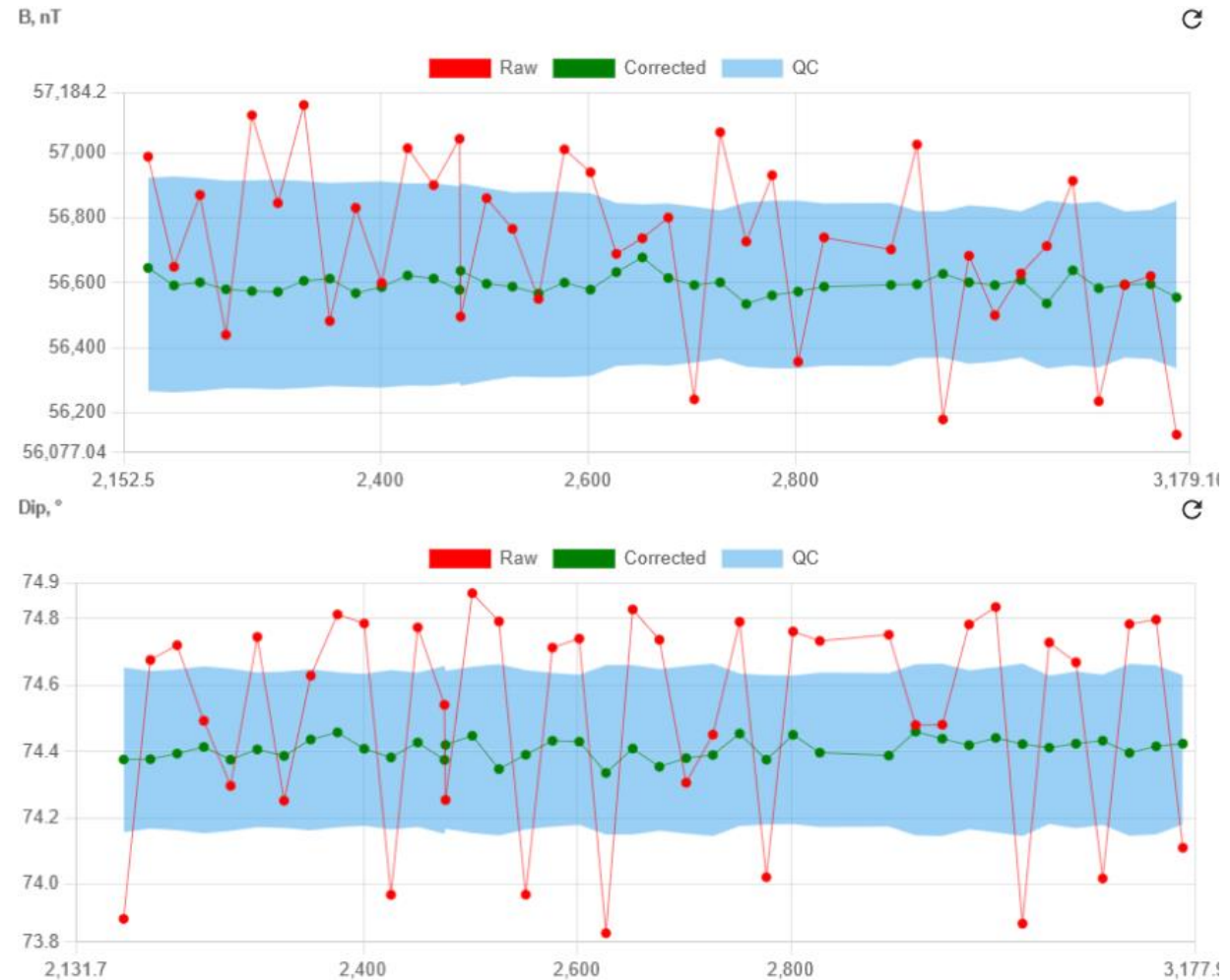
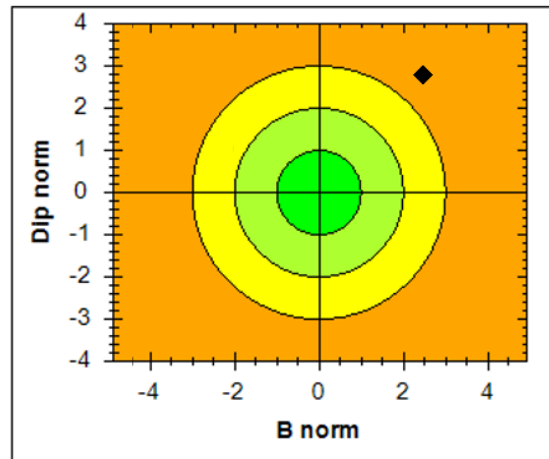
- Cloud based distributed design
- MongoDB for data storage
- Can be deployed in Web or locally
- Web interface for:
 - Correction and data management
 - User management
 - Survey correction troubleshooting
 - Dashboard for quality monitoring
 - Reporting
- WITS service for automatic data streaming



Automatic QC: Data Quality

- Actual vs Plan Control
- Dynamic Filed Acceptance Criteria: total G, total B, and dip angle vs MWD error model
- Geomag reference offset control

Geomag reference: IFR1



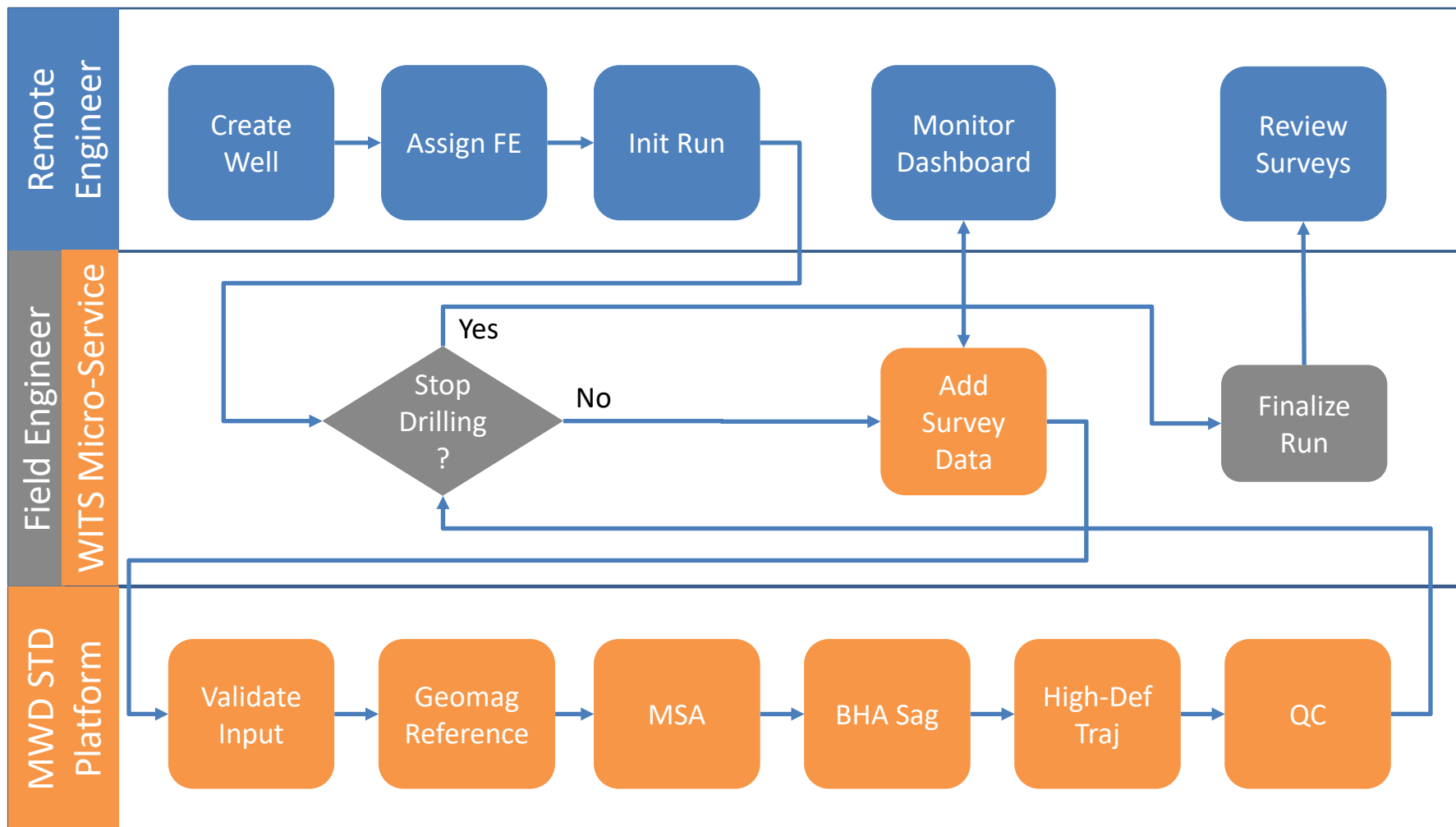
Automatic QC: Algorithm Control

- MSA:
 - Algorithm convergence
 - Minimum MSA requirements
 - MSA result vs MWD error model
 - MSA accuracy vs MWD error model
 - Geomag references vs geomag error model
- BHA sag:
 - Algorithm convergence
 - Result vs MWD error model
- High-def traj:
 - Continuous data density
 - Continuous vs static measurements

HDTRJ	MSA	SQC	SAG	POS
HD trajectory				
VLD	FREQ			
MSA				
CONF	ACC	SRV#	FSLB	
EXP	CONV	LNK		
Survey quality				
REF QC	SRV QC	RT QC		
Sag				
CONV	EXP			
Trajectory position				
STR QC	PLAN			



Real-Time Workflow



Links

- **Source code:**
 - [MWD STD Basic: Docker Compose](#)
 - [MWD STD Basic: Front-End](#)
 - [MWD STD Basic: Back-End](#)
 - [MWD STD Basic: Calculation Server](#)
 - [MWD STD WITS Service](#)
- [Deployment Instructions](#)
- [AWS Installation Video Guide](#)
- [User Manual](#)
- [Explanation of Basic Services](#)
- [License](#)