eDrilling Docs

wellGuide

1. Introduction

wellGuide is a system which provides real-time decision support with automatic forward-looking and what-if simulations. To achieve this the digital twin includes autocalibration modules, which automatically finds the current operational friction factors, related to both fluid and mechanical.

wellGuide is a superset of wellAhead, with the following extensions:

- wellGuide plotting interface
- wellGuide well configuration and task creator
- Autocalibration-FM: Which calibrates the fluid model (Flow Model)
- Autocalibration-TD: Which calibrates the mechanical model (Torque & Drag Model)
- Advisory Module: Which runs forward-looking and what-if simulations to find optimal operational parameters

wellGuide documentation consists of these additional modules:

- wellAhead: https://docs.edrilling.no/wellahead/latest/wellahead.pdf
- wellViz3D: https://docs.edrilling.no/wellviz3d/latest/wellviz3d.pdf
- Advisory Module: https://docs.edrilling.no/advisorymodule/latest/advisory-module.pdf
- Autocalibration-FM: https://docs.edrilling.no/autocalibration-fm/latest/autocalibration-fm.pdf
- Autocalibration-TD: https://docs.edrilling.no/autocalibration-td/latest/autocalibration-td.pdf
- Flow Model: https://docs.edrilling.no/flowmodel/latest/flow-model.pdf
- Torque & Drag Model: https://docs.edrilling.no/torquedrag/latest/torque-drag-model.pdf
- Operational Status Module: https://docs.edrilling.no/operationalstatusmodule/latest/operational-status-module.pdf
- Diagnostics Module: https://docs.edrilling.no/diagnosticsmodule/latest/diagnostics-module.pdf
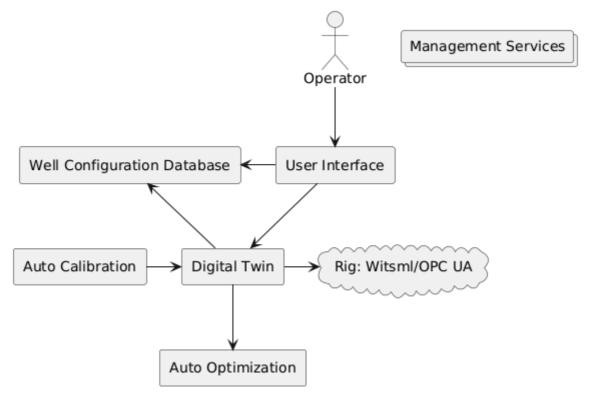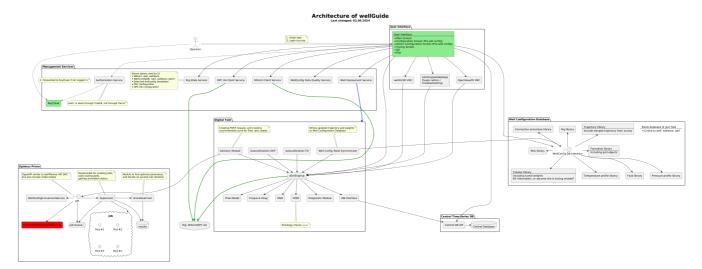- eDrillingHub: https://docs.edrilling.no/edrillinghub/latest/edrillinghub.pdf

2. Architecture

Figure 1. Overview architecture

Figure 2. Software architecture