

The All-in-One Solution for CP Management

With the web-based platform CP Analyst (CPA), GEOMAGIC has created an integral, hardware- and vendor-independent tool for managing cathodic protection (CP) data that also provides a historical view of all data and CP management history.

Goals and project approach

CPA was created to meet customers' need for a central system to manage a wide range of heterogeneous CP data sources, including their history. The software was implemented from scratch as an independent product. Technologically, CPA is based on GEOMAGIC's proven GeoNAM platform. The specifications and functionalities were developed in close collaboration with the customers in an ongoing process and in constant communication. The later end users were able to use an evaluation system to test new features with actual customer data already during the development phase.

CPA offers a user-friendly web interface and is now a firmly established and long-standing component in the CP management process of numerous network operators. We are continuously developing CPA in close cooperation with our customers.

Area of application

CPA integrates all CP-relevant data from many different and previously incompatible systems without being limited by the technology or methodology used for measurement. This includes, for example:

- Inspection data on test station surveys, close interval surveys (CIS), as well as direct and alternating current voltage gradient surveys (DCVG/ACVG)
- Remote-monitoring databases by various providers
- Soil resistivity investigations
- Rectifier surveys
- Asset information from the inventory documentation (e.g., GIS)
- Commercial data from SAP
- Documents from document management systems or file repositories etc.

Using CPA, you can put all required information into context, evaluate them and display them in charts showing their development over time.

Increase of efficiency in everyday use (using the example of a survey)

Using CPA, you can optionally create a template file for your measuring device, which already contains basic data on the inspection. The actual reading values are added during the inspection process and can then be imported into CPA and linked to the corresponding test stations. Additionally, photos and logs created during the inspection can be attached to the inspection or to the test station in CPA.

The new reading values are automatically checked against any defined threshold values by CPA. If a threshold value is exceeded, the corresponding reading values and test stations are marked as critical. In addition, deviations from any defined reference inspection may also be marked as critical.

Visual highlighting makes sifting and evaluating inspection records easier for the responsible CP experts by providing a clear layout. After evaluation, the reading values can be released and made visible to a larger group of users.

For close-interval surveys, problematic reading values that may point to issues such as coating defects can be grouped into anomaly records. These records can then be exported to a linked maintenance tool such as GeoNAM Care in order to plan correction measures. Anomalies can be displayed in the map as well as in table views and exported.

»For the first time, we can bring together all relevant information on protected structures, CP assets, CP inspections and reading values in a simple user interface and evaluate them in context. This is a whole new dimension for us. The tedious hopping from one tool to another by different providers is finally over – and so is the search for inspection data on shared drives!

Moreover, we can now compare CP inspections from different years, which is a huge gain for us. CPA helps us to immediately see what has changed in rectifier, protected structures, and CP regimes.«

Customer benefits

- Until now, CP-related data was kept in different systems and in a variety of file formats, which makes it hard to correlate. CPA offers numerous interfaces and integrates, centralizes, and links CP data to enable the customer to see all available information at a glance and to use them for CP management in an optimal way.
- Without CPA, it was difficult to access historical CP data and view data timelines. CPA documents the status quo of cathodic protection and its development over time. It allows going back into the past to look at earlier asset information and evaluate it. Earlier inspections, for example, may refer to test stations that no longer exist. CPA presents historical states consistently.
- In addition, tools such as dashboards, reference and threshold values, interactive charts and tables, graphical comparisons, schematic representations of CP systems etc. facilitate the evaluation and comparison of data.
- CPA provides audit-proof storage and preservation of all CP-related data.

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