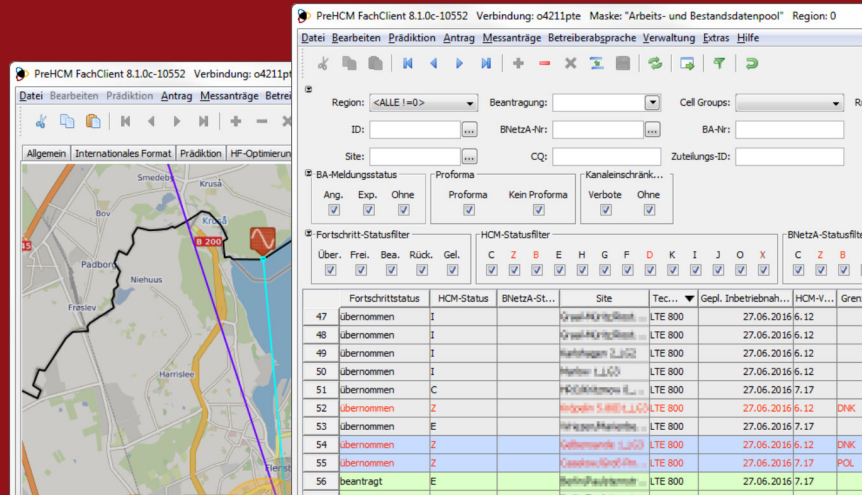


## Frequency Assignment and Coordination with PreHCM

Automation of the frequency registration process for TETRA, GSM-R, GSM, UMTS, LTE



### Automation of the frequency registration and assignment process for German mobile network operators

Representatives of 17 national telecommunications authorities signed the HCM Agreement for the coordination of frequencies between 29.7 MHz and 43.5 GHz.

The aim of the HCM Agreement is to avoid interferences and make optimum use of frequencies near borders. Compliance with the international frequency coordination agreement is monitored by the national regulators. In Germany this is the Federal Network Agency (BNetzA).

Under certain circumstances, radio cells which exceed field strength limits with respect to the limit and/or the receiving equipment of the Federal Network Agency's Test and Measurement Service (PMD) may not be allocated frequencies and thus not be granted an operating license.

PreHCM Mobile is optimized for German mobile network and trunked radio operators. The system is designed to meet current regulatory requirements with the focus on border coordination according to the HCM Agreement. It automates and integrates the frequency coordination process into operational network planning: GSM, UMTS, LTE, GSM-R, TETRA, PMR, trunked radio, analogue radio and others. In addition, the system completes the frequency registration process with the Federal Network Agency for Electricity, Gas, Telecommunications, Post and Railway.

#### Complete lifecycle of parameter setting requests

- Automatic identification of changes and new parameter settings
- Preliminary checks with "site check"
- Predecessor - successor relationships
- Separation of inventory and work data
- Checking and historization of responses
- Archiving during decommissioning
- Complete application documentation

#### HCM Prediction

- Figure Radio compatibility test of the BNetzA
- Border lines
- Test and measurement services
- Operator agreements
- Secondary processes such as protection zones, GSM-R or Broadcast Coordination
- Integration of the original geo-data

#### HCM Optimization

- Fully automatic optimization possible
- Specification of individual attributes, limit values, step sizes possible
- Automatic search for the "best" solution within predefined limits
- Observance of all limits relevant for coordination
- Automatic Loss Calculation

#### Comprehensive solution for the operative telecommunications regulation management

Integration of frequency coordination and allocation by the responsible national administration as an automated comprehensive process in operational radio network planning.

#### Proven product, established for years

For years a mature, robust and highly efficient off-the-shelf solution thanks to the requirements and feedback from regional and national German mobile operators.

#### Individual usage models

PreHCM as Software as a Service, as a local web or as a client/server application. Integration of further components such as HCM area calculation, pattern optimization, etc. is possible.

#### Cost reduction by regulatory site optimization

Thanks to qualitatively optimized registration the most economical usage scenario of your radio cells. Cost savings already achieved in the radio planning phase by means of advance prediction.

#### Consulting included

Solution or full-service provider in operative processes related to the regulator: from individual software adaptations to complex studies.

#### More than 15 years of expertise in frequency coordination

Experienced contact person in all questions of telecommunications regulation due to national and international committee activities as well as many years of experience in representing our customers in dealings with the regulatory authorities.