

# ISOF-PROFAP

estimating the probability  
of technical systems  
failure

## ISOF-PROFAP what is it?

ISOF-PROFAP (Probabilistic Failure Prediction) is an environment which allows advanced numerical estimation of failure probability of technical systems, in particular computer systems. The above is achieved by individually run simulation, analysis and control over hardware operational reliability.



### Protection of critical infrastructure

Implementation of ISOF-PROFAP can be particularly valuable in banking systems, where each failure is costly from both economical and marketing standpoint, because each time it is widely commented by the media. The system also helps to fulfill the requirements of new D and M Recommendations issued by the Komisję Nadzoru Finansowego (eng. Polish Financial Supervision Authority).

“The innovative method of failure occurrence supports us,  
when making decisions concerning hardware purchases”

MARIUSZ RYMGARTNER

### ISOF-PROFAP Integration with hardware/device registry

Reliability analysis is most usually performed on individual elements instead of on complex systems. With the use of ISOF-PROFAP one can model any structure of IT hardware. ISOF-PROFAP was integrated with a hardware registry module of the ISOF system. As a result the calculations are performed on actual elements of the company's fixed assets. The analysis results can be saved in DMS and a Results Dashboard (Management Cockpit) can be defined – a spreadsheet containing the results of reliability analysis for the entire device as well as all of its individual components.

## AFR

The registry of each device can contain its numerical characteristic in the form of density probability distribution of failure expressed using the Annualized Failure Rate coefficient. Ergonomic interface allows to easily enter hundreds of individual elements into the system and the calculation of the coefficient for the entire system, a group of or individual devices. As a result it is possible to model a device structure, which includes both redundancy, as well as direct dependency of devices. This builds an efficient and mathematically credible mechanism of reliability estimation.

## FAILURE

The analysis can be performed cyclically at a set of time intervals while also taking into account the wearout and replacement of elements after failure. The ability to set the reliability of the system is especially valuable at a moment when due to failure a replacement of the main element for the back-up has been made and until the primary element is renewed, operations are performed under a higher degree of risk, which as a result of ISOF-PROFAP can be estimated.

## TOOL



ISOF-PROFAP has become a useful tool for persons responsible for IT systems with critical significance. HEUTHES, since the beginning, having dealt with banking systems for the past 25 years, sought the need for advanced approach to reliability problems. Even more so that, solutions based on intuition, as well as commonly considered as secure have not always been such after analysis. Human intuition often fails when conducting analysis of probabilistic issues, and the ISOF-PROFAP analysis model is the essential protection against a self fulfilling proverb about "wisdom after loss".

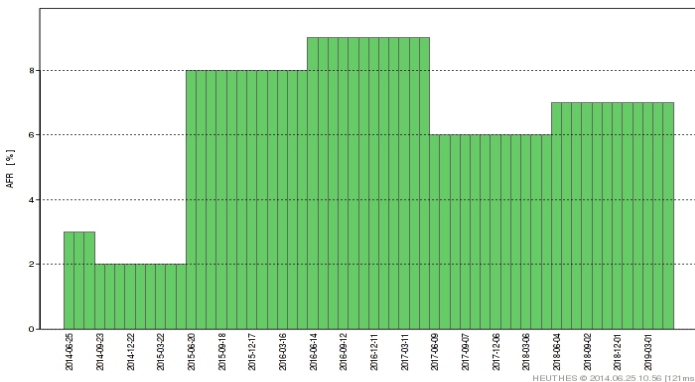
## DEVELOPMENT

The ISOF-PROFAP project is continuously developed, and the HEUTHES company closely cooperates with its clients, who have the opportunity to contribute specific implementations and requirements. The system's interface is currently available in Polish and English, however German language version is also planned in the future.

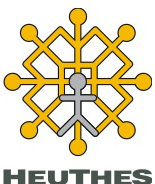
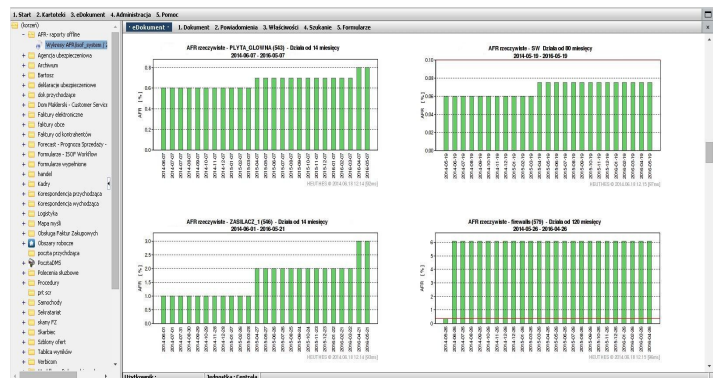
## License or Cloud – how to purchase?

ISOF-PROFAP is offered in both license form as well as a standalone SaaS service, available through HEUTHES computing cloud, in which an independent simulation, analysis and control over devices can be performed. We invite persons interested in purchase to fill out the the contact form or to send a us an e-mail at [marketing@heuthes.pl](mailto:marketing@heuthes.pl) or contact us by telephone at + 48 91 460 89 74 ext. 29.

The time related AFR distribution diagram for a HD disk



Management Cockpit



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