



# Automated Testing Control System



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## A Perfect Solution for Complex Systems

Octopus was used in the automation project dealing with the development of Fourier transform infrared spectroscopy (FTIR) control system. It required extremely complicated software to ensure the proper installation and operation of Fourier analyzers and their environment for multi-component emission analysis. The analyzer aims to carry out the automatic measurement of gas engine toxicity and ensure its compliance with the ecological standards Euro 3 and 4.

It won't be an exaggeration to say that without Octopus the major part of bugs would be left unfixed to come out only during product utilization on the customer side, to say the least of the delivery deadline. Moreover, being used in the project only partially, Octopus helped us find some designing faults!

Every build consisted of 11 configurations, each of which was to be developed into a complete application controlling the spectral analysis of a particular equipment set. If you multiply the number of builds by the above mentioned figure, the number of daily testing procedures mounts to three figures...

### Operation Concept

For each new build Octopus created 11 configurations (each configuration controls the spectral analysis of a particular equipment set), their components and procedures were compared with the reference data, which allowed tracking bugs. Although there were not many configurations, multiplying the number of builds by the number of components and procedures for configuration check resulted in a three-figure number of daily tests...

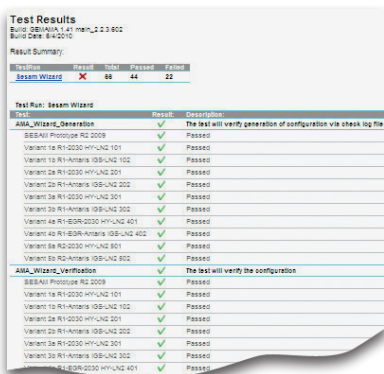
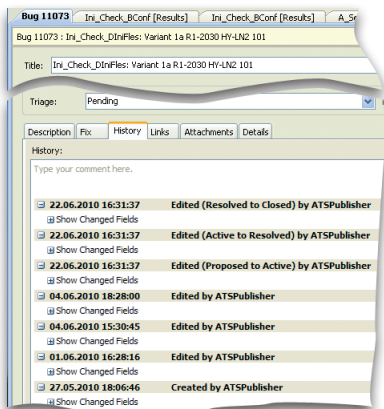
Using Microsoft® Visual Studio® 2008 Team Foundation Server (TFS) as a bug tracking system, Octopus was quick and smart at solving the problem. It allowed tracking both developers' bugs and issues caused by changing customer requirements for system operation (e. g. designed gas paths).

To test build configurations Octopus used a complex testing sequence which required no human attendance. The system Octopus tracked bugs, reported them to the bug tracking system and closed them as soon as the bugs were fixed in subsequent builds.

### Graphic Interface

In the picture on the left you can see that bug #11073 was reported to TFS by the automated system ATSPublisher which is an Octopus component responsible for reporting and closing bugs according to the operator's settings.

The picture below demonstrates a unified Octopus report. The Build 602 report lists bugs detected as a result of 22 tests.



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