

# MAINTENANCE/ SUSTENANCE

## Case Study

Domain: Chromatography

Type: Maintenance/ Sustenance

*“Software for data acquisition, analysis, reporting and managing chromatography data quickly and efficiently”*

## Maintenance for Chromatography Data-Handling System (CDS)

The legacy CDS software developed by a leading global innovator, manufacturer and supplier of high-end Analytical Instruments has been one of the award-winning solutions for Chromatography users across various manufacturing and research segments. The software serves as a controller and data manager for the overall Chromatography workstation and is designed to work in an industry-standard networked environment.

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### Challenge

- “Short Response Time” as end-users’ were expecting a new release
- “Minimal architectural knowledge” yet to provide fix with low impact solutions to minimize validation overheads at customer site
- **Validation** of entire CDS software on a new OS with limited automation provision
- Creating environment along with high-end analytical instruments (GC/LC)
- Dove-tailing B.A.T. processes into client-driven issue resolution system

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### Solution

- An **Onsite-Offshore model** was adopted and adequate overlap in timing with the client was planned for effective information exchange and speedy progress
- **Satisfactory Customer Process adherence** because resource planning was important due to dependence on specialized instrumentation know-how

## Assessing The Solution:

The client is a leading global innovator, manufacturer and supplier of high-end analytical instruments like Gas and LC Chromatography, Optical and Mass Spectrometry, etc. The client also offers reagents, instruments, platforms, software, ready-to-go methods, fully tested and optimized consumables supporting a wide range of applications in the field of Analytical Instrumentation.

B.A.T. assiduously assessed the client's requirements of "**Maintenance/ Sustenance**" of software that also included the strategy to manage future releases / patches for the growing volume of chromatography users. The scope of services for B.A.T. was fixed for this project that included:

1. **Bug Fixing**
2. **Enhancements**
3. **Validation on new operating system**
4. **Solving internationalization (Chinese / Japanese) issues**
5. **Online help (updatation and converting .hlp to .chm)**

The service deliverable includes resolution of issues arising during operational life of the software which may require appropriate explanations to customers or modifications to software.

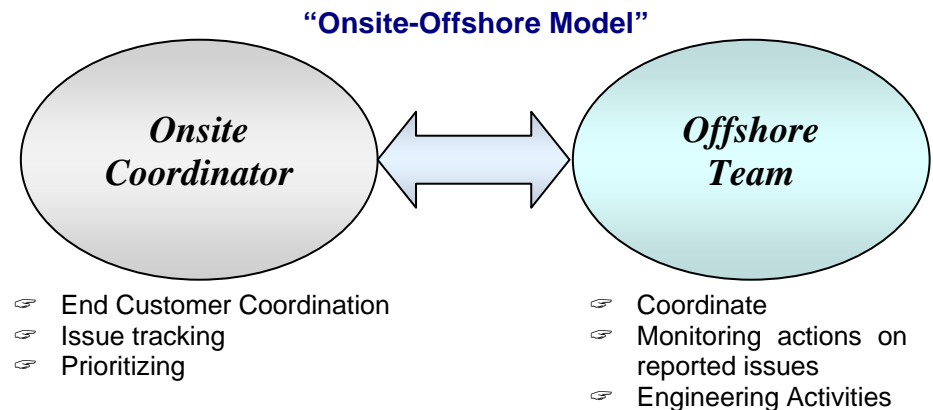
The customer being a leading global name in the field of analytical instruments and related instruments, B.A.T. had to ensure that robustness and quality of the development adhering their existing stringent standards.

## Delivering The Solution:

Client approached B.A.T. for assistance. B.A.T. team assessed the exact requirement of the client and decided to follow "**Onsite Offshore Model**" for faster response and resolving successfully all the issues of client's customers in the current imaging software for high precision optical instruments.

The client looked forward B.A.T. as a competent organization having skills in the areas of chromatography, spectroscopy and image processing allied with healthcare/ life-sciences, to carry out their maintenance activity. B.A.T. deliverables included resolving of issues arising during operational life of the software which may require appropriate explanations to customers or modifications to software.

Correct understanding of the application and end-user perspective was achieved by a quick ramp-up and knowledge transfer phase. This played a vital role in providing robust solutions to issues, and helped customer to handle entire process with end-users very smoothly and professionally.



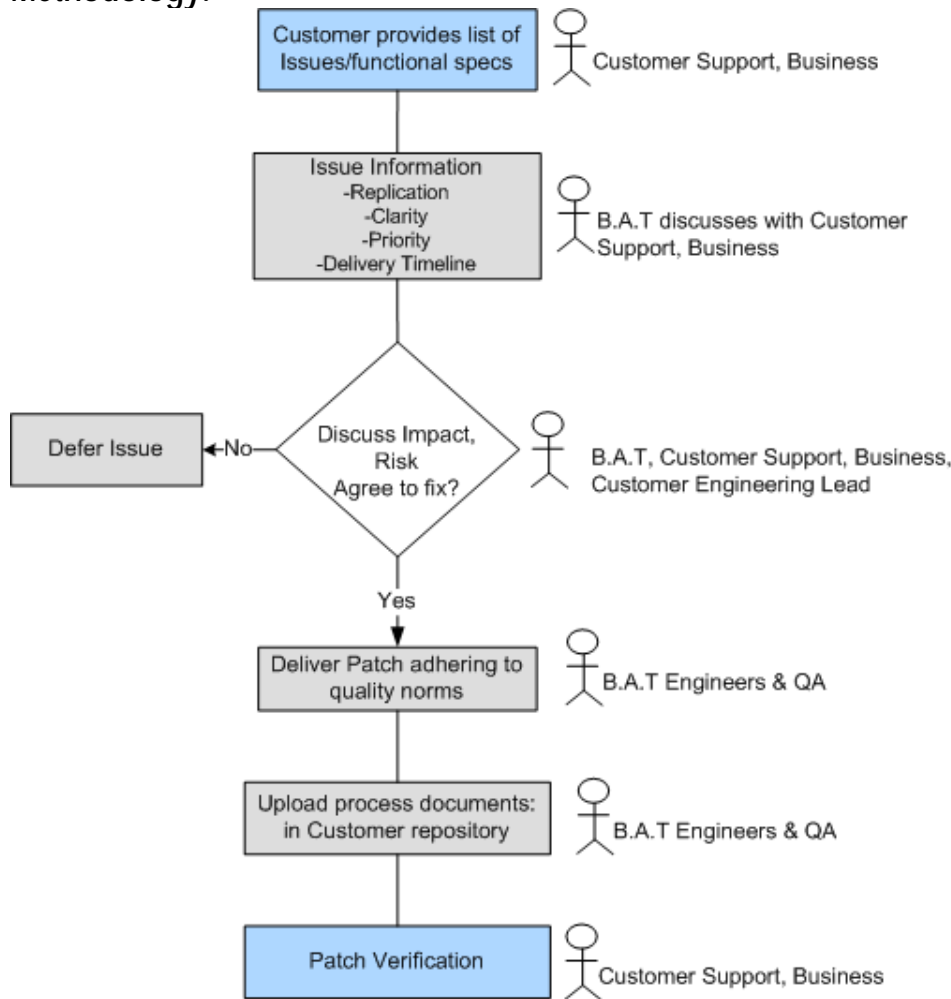
## Key Technologies:

- ✓ Environment: Microsoft Visual C++
- ✓ GUI Development: MFC, ActivX
- ✓ Configuration Management Tool: Microsoft SourceSafe VSS 6.0
- ✓ Reporting Tool: TCPublisher
- ✓ Other Tools: Formula1 Grid Control, Quality Center for test management.

**Solutions Deployed:**

1. In addition to customer’s existing processes, B.A.T framed a Problem Solution Document which had complete traceability of engineering activities carried out on that issue.
2. B.A.T.’s domain expertise helped in evaluating the product functionalities and providing best possible engineering solutions in reasonable time.

**Methodology:**



**Testing Process and Scope:**

- Step 1: Defining test strategy on the basis of pre-agreed work process
- Step 2: Testing the entire software on various OS
- Step 3: Reporting of Defect found
- Step 4: Validation of Defect once fixed
- Step 5: Test records were uploaded and maintained at customers test management software (Quality Center)

Testing included functional testing for validating chromatographic data:

- Calibration of instrument
- Preparation of samples
- Data acquisition and evaluating results against specified standards
- Validating Reports

**Benefits:**

- The client fulfilled their commitment to their customer without any major management and resource overheads.
- B.A.T. software expertise coupled with domain expertise reduced maintenance cost for the client.
- This model helped client to provide continuous support to their customers globally.
- The client had access to diverse skills under one roof– B.A.T.
- B.A.T. worked as an extended arm to the client, which helped client to concentrate on Core Tasks.