

Developing test plan and management system for leading scientific database provider.

Q3's global sourcing model gives the maximum benefit to customers in terms of cost savings, improved quality, access to highly talented professionals, flexibility of operations and reduced time to market.

Case Study - Leading scientific databases provider

Company Profile

The Client is a leading supplier of discovery, collaboration, and knowledge enterprise solutions, desktop software, scientific databases and consulting services to the pharmaceutical, biotechnology, and chemical industries. The Company provides Enterprise solutions, desktop software, scientific databases, and professional services for biotechnology, drug discovery and chemical research, including software, databases, and web sites which enable customers to create, analyze and communicate chemical, biological, and scientific information more effectively.

Company's products are used primarily in the pharmaceutical, biotechnology and chemical industries, as well as in higher education and in academic and government research. The company's principal software offering Chem & Bio office suites which includes molecule sketching tool for biology and chemistry entities, Chemistry and bioassay related databases and Electronic Lab Notebook is the de facto standard and primary communication tool on the chemist's desktop used for the analysis and property predictions of the chemical and biological entities. The Scientific Databases bring a wealth of chemical information to the desktop. Searching through these databases by chemical names, structures, physical data, suppliers, safety data, and literature references enables research information organizations to deploy application and information solutions using Internet, intranet, and extranet technologies.

The collection, storage, and use of chemical and biological information is one of the cornerstones of modern scientific research. Scientists routinely rely on information from a wide array of sources to help them plan their research. Such information includes reaction pathways, chemical properties, sourcing, and biological assay results, or toxicological information. This information is searchable with a single query by structure, substructure, name, synonym, partial name, and other text and numeric selection criteria.

Business Situation

Database	Description
Chemical properties database	Structure-searchable encyclopedia of chemicals, drugs, and biologicals. Monographs on single substances and related groups of compounds cover chemical, generic, and brand names; registry numbers; physical data and literature references; structures and stereochemistry; toxicity information; and therapeutic uses.

Database

Description

Drug pipeline database

Structure-Searchable candidates in various stages of drug development. Up-to-date details of phase of development, originator and licensees; References from the scientific and medical literature, as well as press announcements, tradeshows, and conference.

Commercially available chemicals database

Chemicals from chemical manufacturers and distributors, featuring complete catalogs of major world suppliers of fine research, specialty, and industrial chemicals.

Chemical reference database

Extensive chemical reference for finding general information about commonly used compounds, such as structure, name, molecular weight, CAS Registry Number, synonyms, and physical data (melting point, boiling point, vapor pressure, etc.) Allows 2-D as well as 3-D searching.

Chemical reactions database

Includes literature citations, products, reactants, solvent and catalyst data, yields, and reaction conditions.

The business requirement of the client was to develop a test strategy, test plan and management system to test the Data as well as the Functionality for different Chemistry and Drug Databases and turned to Q3 to execute the same. The product needed to be tested on Windows platform with data residing in Access and Oracle. To test the product, testers with the domain knowledge and thorough with the testing process were required.

Solution

Testing the Chemistry and Drug databases specifically refers to data continuity, structural relevance, functionality with the data, and Database integration with the data. Working closely with the client, Q3 developed a stable and reliable test strategy and test plan for the entire range of Databases. Deployed resources to meet the needs of a client and identified and assembled an agile team consisting of experienced testers with domain expertise and QA exposure.

- » Exploring the products and their functionalities, developing and writing the effective Test Cases as per requirements
The databases were used by major Pharmaceutical and Biotech Companies, so their requirements to comply with data qualities were considered and mapped into test plans.
- » Data content quality checks were done for molecular Structures 2D & 3D, Bioassay and reaction text and numeric data contents. Query search was performed for the same on databases residing in Oracle and MS Access.

Solution

- » Exploratory or Ad-Hoc testing on various flavors of Windows operating systems was employed on various builds.
- » Installations of various builds with effective test coverage on all flavors of Windows OS platform.
- » Effective defect reporting, categorization and tracking were done with the help of our customized bug tracking tool.
- » Weekly meetings with Client to discuss the status, updates and strategies of testing for new releases.

- » Entire testing was done by Q3 Team so the client was benefited by manpower with less cost and above all supporting 24*7 work environment.
- » Testing was done in user's view so the bugs entered were realistic as interaction with developer happened rarely.
- » Q3 Team was honored again for testing the customized product for different clients.
- » Talent and quality was appreciated by Client which was shown by involving Q3 in Sales meeting after the release of the product.
- » Strict quality adherence standards for testing resulting in fewer problems for end-customers

Benefits