

# LEARNING DEVICE MANUFACTURER TRANSFORMS SOFTWARE TESTING EFFORTS

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## Business Needs and Challenges

LeapFrog Enterprises produces award-winning educational toys, interactive books, and hand-held electronic games. For nearly a decade LeapFrog employed a team of approximately 35 quality assurance (QA) engineers and 75 seasonal contractors to test their devices and software. Most testing was performed onshore and proved to be a costly operational challenge. It quickly became apparent to LeapFrog that in-house software testing had become an inefficient practice so the company began outsourcing QA to multiple vendors from around the world. After several years with mixed results, LeapFrog hired LogiGear for software testing services in 2006.



*“LogiGear has been instrumental to the success of our aggressive growth strategy and will be a critical partner as we meet our ambitious product introduction goals.”*

**Lyndal Fry - VP of Quality Assurance - LeapFrog**

## FAST FACT

### INDUSTRY:

- Education Software & Devices

### WEBSITE:

- [www.leapfrog.com](http://www.leapfrog.com)

### COMPANY SIZE:

- About 750 Employees

### LOCATION:

- Emeryville, CA

### LOGIGEAR DELIVERED:

- TestArchitect™
- Software Testing Services
- QA Consulting & Training

### BUSINESS IMPACT:

- Reduced hourly costs by 30%
- Reduced QA staff by 60%
- Eliminated seasonal hiring
- Record product releases

## The Vision

LeapFrog embarked upon an ambitious new market leadership strategy. Key components of the overall corporate strategy called for aggressive new product introductions and the web enablement of all existing products. Critical to the success of this strategic initiative was the ability to improve operational efficiency. The new strategy required increased research and development productivity and throughput while preserving the existing QA budget. LogiGear immediately began working together with LeapFrog to develop the fundamental changes necessary to transform their approach to software testing.

## The Solutions

LeapFrog's pilot project with LogiGear proved to be a success, raising the effectiveness of LeapFrog's overall QA efforts by a significant margin. Due to the successful pilot project, LeapFrog launched an ambitious initiative to outsource 80% of all software testing. To ensure the success of their strategy, LogiGear developed a custom growth, training, and execution plan that enabled the company to outsource 100% of their functional software testing. Upon review of LogiGear's plan, LeapFrog's Vice President of QA made the decision to partner solely with LogiGear for software testing citing the quality of service, open communication, low cost, and staffing scalability. Software testing efforts included manual and automated tests as well as team and process improvement. A wide variety of software was tested including PC applications, web integrations, embedded devices, downloadable and cartridge based games, and the databases used to run LeapFrog's international sites.



*"With LogiGear as our partner, we go home on time and sleep well at night."*

*Lyndal Fry - VP of Quality Assurance - LeapFrog*

## Test Design and Execution

The LogiGear team formulated test plans, wrote test cases and executed those test cases. Test case execution was both manual and automated. In addition, a fully accessible defect database was continually maintained.

## Action Based Testing

LogiGear made use of the Action Based Testing™ (ABT) methodology for device testing and database testing. ABT is a keyword driven methodology pioneered by LogiGear, which facilitates the creation and maintenance of automated test cases by reducing the effort needed to automate and maintain test cases. TestArchitect™ was the specific tool used during the testing process.

In addition to software testing products and services, LogiGear provided QA training on testing methods such as Action Based Testing. Also, LogiGear continues to assist LeapFrog with resource planning and the tracking of efforts expended on each product line. Lastly, LogiGear remains committed to defining the build acceptance tests for all manual testing.

For over 20 years, LogiGear has helped organizations deliver SOA testing efforts including SOAP and REST based systems to ensure the robustness, reliability and resilience of the web service. LogiGear helps organizations achieve and keep up QoS needed to stay ahead of competition by implementing a comprehensive SOA testing strategy that covers functional, load & performance, interoperability, and security testing from a business needs perspective.

## The Future

Since 2006, the relationship between LogiGear and LeapFrog has only grown stronger. Using LogiGear's software testing expertise, LeapFrog has been able to create, automate, and execute tests for over 150 different products. Over time, LogiGear and LeapFrog expect efficiencies to improve even more due to increased familiarity with the product line and the ability to reuse significant portions of existing software tests for new software revisions.

## Types Of Testing

One of many testing projects - *SpongeBob SquarePants Fists of Foam*, an educational math game for children:

- Manual
- Automated
- Black box
- Gray box
- Database
- Exploratory
- White box



## About LogiGear

LogiGear is a leading provider of Software Testing services, Test Automation, and application development and maintenance. We help organizations deliver better products while saving time and money. Since 1994, we have completed testing projects for hundreds of companies, from early stage startups to Fortune 100, across a wide range of industries and technologies.

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