

CLIENT QRA Corp
PROJECT Problem/solution white paper
OBJECTIVE Generate inbound traffic and leads and build awareness for a new engineering requirements analysis tool

COPY EXCERPT

Leveraging Natural Language Processing in Requirements Analysis: How to eliminate over half of all design errors before they occur



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Numerous studies have shown that the cost of fixing engineering errors in systems and software increases exponentially over the project life cycle. Couple that with results showing that more than half of all engineering errors originate in the requirements, and you have a compelling argument in favour of finding and correcting requirements errors where they occur... at the very beginning of the project.

Up until recently, however, most error detection tools used in systems development – code syntax checkers, debuggers, static analysis tools, wiring testers and the like – have been designed to find errors in the software or hardware build rather than in the requirements.

Automated detection of requirements errors has been a much tougher nut to crack. Most requirements documents are still written in natural language, and often, it's the inherent ambiguities of natural language that cause requirements errors.

Finding ways to analyze natural language text and identify possible sources of requirements error has been a difficult problem to solve.

Fortunately, new requirements analysis tools based on natural language processing (NLP) are now emerging. They promise to significantly reduce the cost of fixing requirements errors by finding them earlier and faster, and to free domain experts from tedious, time-consuming tasks that waste their expertise.

Cost to fix errors rises exponentially over the development cycle

In 2004, NASA performed a study on the relative cost of fixing engineering errors during the various phases of a project development cycle. They reviewed a number of previous studies (Boehm, Rothman, McGibbon, Chigital, and others), and also ran cost analyses on a number of large systems development projects.

There was one finding common to all the software studies they examined and all the systems development projects they studied: the cost to fix software defects rose exponentially with each successive phase of the project life cycle.

"In a nutshell, John did a fantastic job with the project. His writing was clear, his content thoughtful, and the end deliverable was exactly what we were looking for."

Trevor Bradley
Marketing Manager
QRA Corp

copyengineer

B2B Copywriter specializing in technology and software