



Report In Brief

OCTOBER 30, 2014

Background

USPTO is the nation's single entity that examines, grants, and registers patents and trademarks to individual inventors, organizations, and businesses. USPTO's vision for the next 4 years includes plans to continue transforming its operations with next-generation technology and services. Its two major next-generation development efforts are Patents End-to-End (PE2E) and Trademark Next Generation (TMNG). Both are information technology (IT) portfolios made up of several projects. The goal of each is to develop automated, fully integrated, end-to-end systems to support patent and trademark processing, respectively.

Why We Did This Review

Our analysis of the progress the agency has made in developing its IT modernization projects was conducted based on three audit objectives:

- to assess the impact of IT contract termination decisions that were made as a result of the \$110 million reduction to USPTO's IT budget in FY 2013, and to assess the appropriateness of project funding in the reduced budget environment;
- to review the progress USPTO has made in implementing the recommendations from the FY 2011 PE2E audit conducted by OIG—specifically, the technical progress it has achieved to date, its use of the Agile methodology, and its plans for future PE2E development; and
- to assess the project management and technical progress USPTO has made in its development and implementation of the TMNG project, including its use of the Agile methodology.

U.S. PATENT AND TRADEMARK OFFICE

IT Modernization Is Progressing, but Improvements Are Needed

OIG-15-004-A

WHAT WE FOUND

We conducted an audit of PE2E during the early stages of the portfolio's lifecycle in 2011 to provide proactive, value-added feedback that could identify potential issues that might hamper the success of the overall project, and published a report of our findings and recommendations on September 29, 2011. In that report, we recommended that USPTO improve development and acquisition planning as well as portfolio oversight. In the current audit, we reviewed the actions USPTO has taken regarding the above-mentioned recommendations, and we found that USPTO has not fully implemented our first recommendation to improve development planning.

We interviewed and observed a sample of the 39 pilot users from the PE2E pilot, begun in November 2012, and identified that their usage of PE2E was inconsistent and ad hoc. Only 30 percent of the users interviewed were using PE2E frequently enough to assess its functionality. In an expanded pilot in 2014, frequent PE2E usage improved to 50 percent, still only making its usage slow to moderate. We also found that there was no monitoring or tracking of PE2E usage in either pilot.

We performed a comprehensive review of Agile development methodologies and software development practices in the PE2E and TMNG portfolios. Overall, we found that USPTO's implementation of the Agile development methodology is maturing, but improvements are needed, specifically in the management of user stories—which are brief descriptions of features—and defects. We also found that improvements in software development practices are necessary, including more robust automated and performance testing and testing integration, consideration of IT security controls earlier in development, and better conformance with USPTO coding standards.

WHAT WE RECOMMEND

We recommend that the USPTO Director

1. fully implement unsatisfied recommendations from our 2011 audit by prioritizing all user stories at the portfolio level, and by developing a high-level model of reusable services for the entire portfolio;
2. identify and implement methods to increase adoption and monitor usage of the PE2E examination tools prior to deployment to the full patent corps;
3. fully define and estimate user stories as well as improve scheduling and estimation of defects;
4. develop and implement a plan to conduct more robust automated testing, earlier integration of functional quality testing (FQT) testers, and performance testing more representative of the production environment; and
5. develop and implement a plan to integrate IT security controls earlier in design and development activities and better align automated code reviews with USPTO coding standards.