

CASE STUDY

A Leading ISV Enhances Productivity of its Construction Software by 60%

About the Client

Headquartered in Colorado, our client provides takeoff solutions to help estimations in the construction industry. It helps contractors and professionals in estimating and completing pre-bid processes without paper plans. It allows construction companies to eliminate the cost and time of traveling to a paper plan room by providing electronic view with powerful zooming and scrolling capabilities.

Technology

- ✓ C# 4.0
- ✓ WPF
- ✓ MEF
- ✓ DevExpress UI Controls
- ✓ FairCom

Business Needs

Client's takeoff product helped contractors perform quantity survey for pre-bid estimation process. It is used to encapsulate quantities for construction works from formal construction documents. This allowed contractors to reduce dependencies on paper based plans and get digitally interactive views of construction layouts.

Their takeoff application enabled limited productivity improvements throughout the estimation process. i.e. moving from paper plans to digital views. Completing the **entire estimation process** required repeated manual interventions. It involved manually transferring the captured measurements from the takeoff application into an estimating system to arrive at the final estimation bid.

As part of overall productivity enhancement of the software and reducing the time for estimation, the client was in need of an end-to-end solution that would allow contractors to have a centralized system to manage and expedite the estimation process.

This solution would also serve as another revenue channel by acting as a generic platform for integration with future takeoff and estimating products.

Challenge

The challenge was to build an application that extends the existing takeoffs utility so that it seamlessly integrates and expedites the entire estimation process. Realizing this vision into a working application required extensive feasibility study and collaboration with the client.

Understanding different takeoff systems and estimating systems and bringing out the common functionalities required extensive research and efforts.

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Another major challenge was to ensure that the product could seamlessly run across different hardware and software configurations pervasive across the market.

Above all, maintaining 100% accuracy level was a challenge as a minor error would invite legal suites and lost reputation.

Trigent's Solutions

Trigent team did an exploratory research of the complementary products (such as Sage Estimating) to design the integration mechanism. This exploratory research and feasibility study also set the foundation for future integration plans as the product evolves to market demands.

Trigent built a scalable architecture that involved plug-in model to support the integration needs. This plug-in model developed by Trigent, allowed other takeoff and estimating companies develop plug-ins that adhered to the integration rules. The whole point of developing the plugin model was to address the future scalability needs.

The team did an extensive performance testing across disparate machines with different hardware and software configurations. This helped reduce environmental issues that might occur in the field, after product release.

Finally, the product was delivered to client and is currently live. The team also took charge of ongoing maintenance and support to ensure it runs smoothly.

Benefits

- ❑ The complete takeoff and estimating time was reduced significantly to the tune of 60%, thus improving users' productivity
- ❑ Trigent was able to build the new application within the scheduled time-line
- ❑ The accuracy improved by almost 80% due to minimal manual interventions
- ❑ The product could also be leveraged to generate revenue to serve incumbent market needs currently unavailable in the market
- ❑ Extended support for training, demo and user adoption