

## New Flyer Streamlines Processes from Design to Production

New Flyer is a leading manufacturer within the heavy-duty transit market in Canada and the United States. New Flyer's offerings include drive systems powered by clean diesel, LNG, CNG and electric trolley, as well as energy-efficient gasoline-electric and diesel-electric hybrid vehicles.

New Flyer has positioned itself to provide the fastest "just-in-time" design to production capability. Consequently, New Flyer's build-to-order manufacturing results in a very high pressure and intense engineering and manufacturing environment. Their execution of the design approval process is critical to the overall success of their business.

### The Challenge: Design to Production – Speeding up the Process

At New Flyer, an engineer was required to print the CAD drawing in order to sign and add their professional seal to the document. A typical document often requires 2 engineering approvals per page, and each drawing can comprise of up to 60 - 70 pages. The signed document would be re-scanned and uploaded into the document management systems, with a hard copy filed into a paper archive. All engineering documents are managed and archived through the *UGS Teamcenter Product Lifecycle Management* solution.

The entire process was extremely labor intensive, unproductive and time consuming. Furthermore, engineers had to go to a central location where plots were generated, to place their signatures and professional seals on the final design.

The ECO (Engineering Change Order) approval process was also based on manual routing of documents among several engineers. These documents, often generated in Microsoft Word or Excel, were manually moved from tray to tray, waiting for review – wasting both time and paper, and affecting engineers' productivity.

New Flyer's management was looking for a way to streamline their processes and cut costs, and they saw the potential value of implementing an end-to-end electronic sign-off process.

### The Solution: Document Security with Graphical Signature Support

New Flyer needed a solution that would eliminate the manual process of printing, signing and re-scanning the thousands of pages of documents generated by the design to production process. They also needed a solution that was flexible enough to allow multiple signatures on documents of multiple formats in order to bring their entire ECO approval process online.



#### How do Engineering and Manufacturing Companies Benefit?

CoSign® is a standards-based electronic signature solution that embeds **signers' signatures, professional stamps**, and other captions onto documents of **multiple formats**.

**Signing & sealing** electronic documents with CoSign will immediately:

- ▶ **Expedite engineering approval processes** associated with CAD drawings, ECOs/ECNs, production flow, QA, technical documentation, and Product Lifecycle Management;
- ▶ **Boost staff productivity**;
- ▶ Enable secure **online file flow** with clients and partners;
- ▶ **Eliminate cost** and security concerns associated with printing, handling, filing, faxing, mailing, scanning and archiving of paper documents; and
- ▶ Ensure **data integrity** and **signer authenticity**. This **limits liability** and guarantees non-repudiation for **legal and regulatory compliance**.

The electronic signature solution had to address security concerns, industry regulations, and New Flyer's specific business processes. CoSign electronic signatures offered a total solution, providing:

- **Signer authenticity** and **data integrity** – guaranteeing version control, record management, and protection against forgery/unauthorized changes;
- A **graphical signature** that includes the engineers' **professional seal** and personal signature, enabling New Flyer to comply with industry regulations;
- **Multiple application support**, consistent with New Flyer's document types (Microsoft Word and Excel, Adobe PDF, UGS' NX CAD); and
- **Multiple signature support**, following the existing business logic and engineering approval processes within the organization.

Today, over 100 engineers are using CoSign to digitally sign, date and seal approximately 300-400 engineering drawings and 250-300 ECOs per week. "Choosing CoSign's electronic signature solution allowed us to shift our energy from manual processes to increasing our efficiency and productivity," said Mark Oleski, Director of Engineering at New Flyer. "We are now poised to face our main challenge of high throughput build-to-order design and manufacturing." The company has streamlined its labor and paper-intensive process into an immediate, collaborative, fully electronic process.

## The Value: Faster Time to Market and Reduced Costs

Initially, New Flyer calculated the ROI for CoSign on hard costs only (i.e. paper, toner, scanner maintenance savings). The actual ROI was much shorter than anticipated when factoring the increased productivity and faster design-to-build approval process. The faster time-to-market and reduced costs gave New Flyer the freedom to concentrate on their core business and increase their competitive advantage.

Finally, by choosing a standards based electronic signature solution based on Public Key technology (PKI), New Flyer created an opportunity for secure online file

**“CoSign allowed us to streamline our engineering approval processes. Now, we focus our energy on faster delivery to the customer and increasing our competitive advantage.”**

David Fraser,  
CAD Systems Manager  
New Flyer Industries

exchange between themselves and their business partners and customers. Using standards-based electronic signatures allows any user to validate the signatures within applications such as Microsoft Word and Adobe Acrobat without installing any proprietary software.

## Conclusion

New Flyer’s commitment to innovation has made them a leader in the heavy-duty bus market in North America. Implementing CoSign’s electronic signature solution was a further step in New Flyer’s continuous drive to improve their internal processes, delivery time and customer satisfaction.