

COMPANY  
**Joyson Safety Systems**

LOCATION  
**Michigan, USA**

SOFTWARE  
**Tetra4D Enrich & Tetra4D Automate**

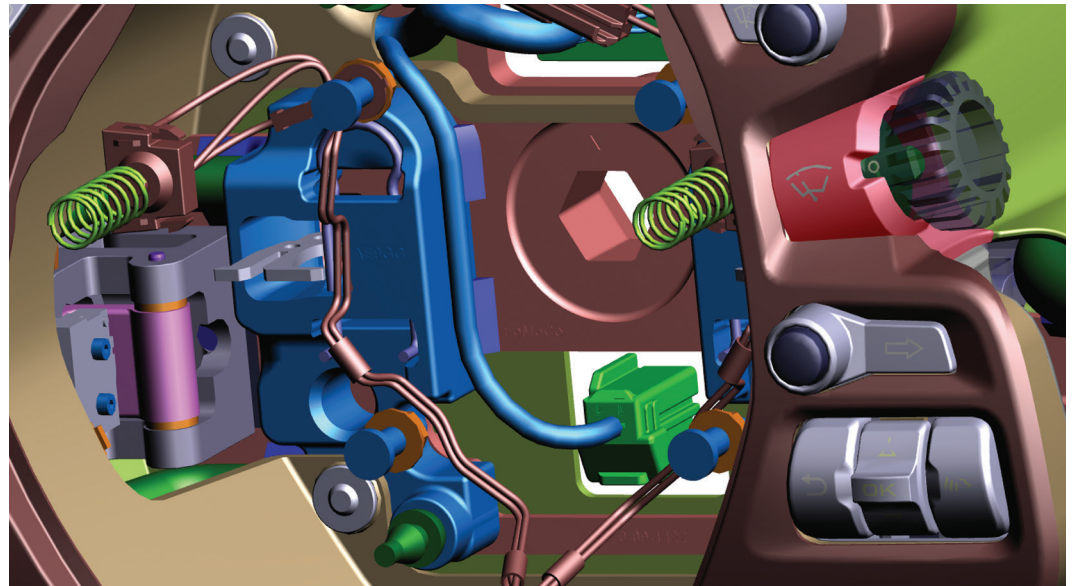
COMPANY WEBSITE  
<http://www.joysonafety.com/>  
<http://www.tetra4d.com>

# Tetra4D Case Study: Joyson Safety Systems

## 3D PDFs Help Safety Manufacturer Simplify Collaboration

“As a manager in the Core Engineering group, I’m supporting our customers during the design, tooling, testing, and launch phases. Checking out CAD drawings at all stages of the development was crucial, but very time consuming. Now with a larger emphasis on 3D CAD data, having a tool that allows users to quickly review the 3D model, comment and measure without needing a seat of CAD or a specialized viewer is a major advantage for us.”

— **Jerome Bosch – Joyson Safety Systems**



### The Challenge

Joyson Safety Systems is a manufacturer of automotive parts, including motor vehicle airbags, seat belts, steering wheels, electronic systems and child restraint systems.

Like many suppliers in the automotive manufacturing industry, Joyson Safety Systems needs to collaborate with various internal departments —many of whom do not have access to CAD systems. The company needed a way to share engineering data between these diverse and complex systems in a way that would allow all users to easily understand design intent, helping facilitate better collaboration.

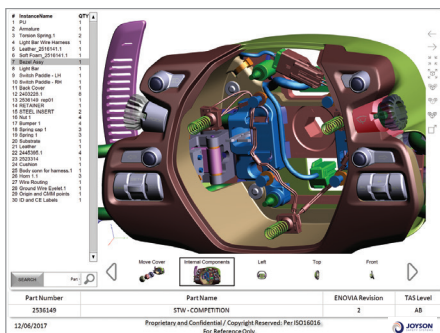
### Creating 3D PDFs with Tetra4D Enrich

The company found an ideal solution by using 3D PDFs to enable smoother sharing of CAD data across the extended enterprise.

Working with a Tetra4D value-added reseller, Joyson Safety Systems deployed Tetra4D Enrich, a solution that allows users to convert 3D data from the latest versions of CATIA, Pro/E, NX, SOLIDWORKS, Inventor, and all other major CAD applications into a data-rich, interactive 3D PDF.

Tetra4D Enrich provides customizable templates that enable users to build compelling documents for advanced product viewing, part catalogs, data packages, and work and maintenance instructions. Various elements—such as view carousels, or a bill of materials—can easily be added depending on the specific use case, with no special programming expertise required. Once built, the templates can be leveraged repeatedly to generate 3D PDFs.

Joyson Safety Systems chose a design review document as the main type of 3D PDF for enabling collaborative design review within



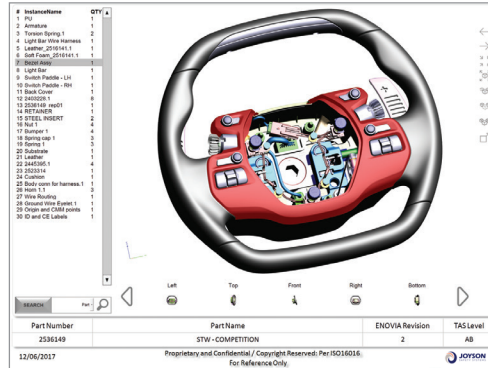
the organization. These critical documents can be viewed by anyone with a copy of the free and ubiquitous Adobe Acrobat Reader.

As Adobe's exclusive provider of 3D PDF technology, Tetra4D ensures 3D content is displayed accurately every time it is opened with Acrobat Reader. Within Joyson Safety Systems, this means that complex CAD data is easily accessible to both CAD users and non-CAD users without the need for expensive licenses or extensive training.

"As a manager in the Core Engineering group, I'm supporting all of our customer business units, working with them during the design, tooling, testing, and launch phases," said Jerome Bosch of Joyson Safety Systems. "Checking out CAD drawings at all stages of the development was crucial in making sure we are creating the best products for our customers, suppliers, and operations group, but it was very time consuming. Now with a larger emphasis on 3D CAD data, as opposed to 2D drawings, having a tool that allows users to quickly review the 3D model, comment, measure, without needing a seat of CAD or a specialized viewer is a major advantage for us."

### Streamlining Further with Tetra4D Automate

The use of 3D PDFs caught on quickly at Joyson Safety Systems, with many departments wanting access to 3D PDFs. Users

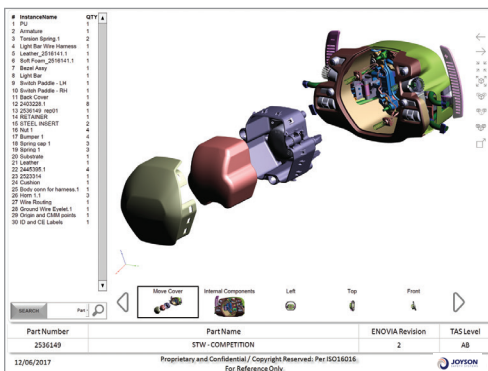


could request to have any CAD data managed within their ENOVIA PLM system turned into a 3D PDF and shared with them. However, because demand was high, creating them individually was not an efficient option.

For a more scalable solution, Joyson Safety Systems again worked with a value-added reseller to deploy Tetra4D Automate, a simple server solution that leverages Tetra4D Enrich templates to automate the creation of rich, interactive 3D PDF documents.

With the Tetra4D Automate batch process tool connected into the ENOVIA PLM solution, users can now select a CAD file in ENOVIA they would like to translate and easily generate the 3D PDF themselves, via a simple click on the drop-down menu in ENOVIA. This process eliminates the bottleneck of users having to ask members of the engineering department to export the CAD data for them.

In the future, Joyson Safety Systems is interested in further automating the 3D PDF generation so that it can be triggered with no user interaction at all—for example, when there's a change in the product lifecycle state, such as a new release, or some other PLM process. With Tetra4D Automate in place, Joyson Safety Systems is well poised to efficiently scale 3D PDF usage across the organization as its needs continue to evolve.



Contact Tetra4D to learn more about how 3D PDF can benefit your organization

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#### Industry:

- Automotive/Manufacturing

#### Challenge:

- Collaborate and share design data with multiple partners, many of them using different CAD systems

#### Solutions:

- Tetra4D Enrich  
- Tetra4D Automate

#### Results:

- Automatically convert CAD data to easily accessible 3D PDF documents  
- Effortlessly share 3D PDF documents throughout the entire enterprise  
- Simplify the collaborative design review process by sharing rich, consumable information that communicates design intent