



About the Company

The Tractor Plants Concern is one of the major Russian integrators of scientific and technical, production and technological and financial resources in engineering industry.

Main product lines: industrial machinery, agricultural machinery, spare parts and OEM components, railway products, special machinery.

The company supports the full product life cycle – from research and development activities, metal and spare parts production to marketing and sales operations, after-sales maintenance and customer support.

The Challenge

Until recently the company used highly time-consuming and labor-intensive paper documentation. The quality of product support documentation didn't meet the current demands. There was a strong need for a new solution to greatly enhance the documentation quality, speed time to market and reduce update time.

Solution

The Tractor Plants Concern has explored several software products and chosen RapidCatalog and RapidManual developed by Cortona3D. This software enables quick and easy creation of interactive 2D/3D documentation based on existing CAD data.

The Tractor Plants Concern, one of the largest machinery industrial groups in Russia, has chosen Cortona3D solutions for creating modern product support documentation

- Reduction of time required to create and update documentation
- Dramatic decrease of errors when choosing and ordering spare parts
- Reduction of time required to learn complicated procedures
- Integrated web portal for service companies and dealers

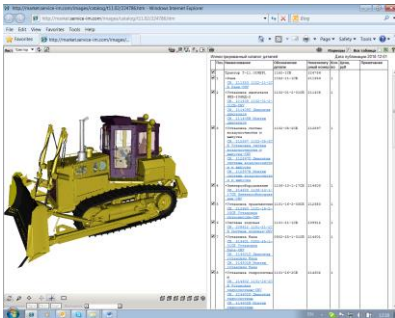
The Tractor Plants Concern consolidates more than twenty large companies in Russia and abroad, its dealer network has 130 partner companies and 50 service centers.

The company is strategically focused on growing its leadership on Russian market of light and heavy mechanical engineering and on increasing its sales on international markets.

Availability of high quality maintenance documentation is one of the essential factors to ensure successful usage of company products. Tractor Plants has chosen Cortona3D solutions for creating maintenance documentation – parts catalogs and technical manuals for assembly and disassembly procedures.

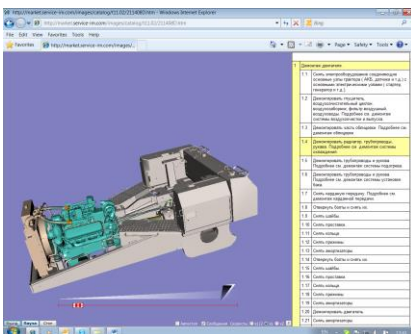
Cortona3D Solutions Benefits

- Significant decrease of documentation production timelines and costs due to the usage of existing CAD/PDM data and integrated environment for authoring 2D/3D graphics and textual descriptions.
- Documentation creating process is easy and intuitive, the product is visually represented in the final document.
- Ability to promptly update documentation and deliver updates to service companies and dealers over the Internet.



RapidCatalog is an effective tool for the easy and fast production of interactive 3D/2D parts catalogs.

Highly interactive and visual environment of the catalog puts an end to spare parts ordering and purchasing errors.



RapidManual is a tool for the easy and fast production of interactive 3D/2D technical manuals.

RapidManual uses 3D simulations to clearly communicate complex mechanical procedures and to improve information retention.

Implementation of Cortona3D solutions

Implementation of new technology started with a 5-day introductory training. After the training the team of authors began creating parts catalogs and maintenance manuals using RapidCatalog and RapidManual. Real engineering data (SE, CATIA, NX, JT, Solidworks and others) were used as the source data. Cortona3D solution allowed to preserve all useful information during the import process, 3D objects were automatically linked to DPL table (bill of materials).

First innovative 3D/2D documentation kits have been created for the products of several companies such as:

- Harvester 'Yenisei - 950',
- Multipurpose construction and community services machine MKSM-800,
- Agricultural tractor AGROMASH-90TG,
- AMZ engines,
- Industrial bulldozer T-11.02.

Created documentation is placed on the company website. This allows for rapid access of service companies and dealers to up-to-date documents.

'Producing a documentation kit for a single model takes much less time for now and as a result the team of authors exceeded the plan for the first year. We also received highly positive reviews from service companies regarding the quality of documentation and plan to extend a list of models with documentation of new generation. As the next step we will create an integrated web portal for service companies' says Evgeniy Gavrillov, the Information Technology Department Manager of the Tractor Plants Concern.

RapidCatalog Benefits

- Automated cross referencing of CAD data and BOM during the import process provides the possibility to easily create 3D/2D interactive catalogs of high quality.
- Ability to customize the catalog appearance and content (DPL table content and other) according to the customer requirements.
- Automatic generation of 2D images based on 3D views. Automatic generation of links between 2D image callouts and active DPL rows.
- Parts catalog can be integrated into an ordering system, maintenance manuals or exported to Excel.
- Ability to create a PDF version of illustrated parts catalog.

RapidManual Benefits

- Integrated environment for creating and authoring 3D/2D graphics and text.
- A library of simple animation actions such as: 'rotate', 'detach', etc. provides the possibility to easily create required sequence of steps.
- Using maintenance manual developed in RapidManual in conjunction with the corresponding parts catalog developed in RapidCatalog allows for rapid ordering of parts necessary for repair and other procedures.

Cortona3D Software

RapidAuthor suite developed by Cortona3D gives the flexibility to produce the full range of technical support documentation. RapidAuthor contains the following authoring components:

RapidCatalog – for illustrated parts catalogs;

RapidManual – for maintenance manuals;

RapidLearning – for training materials;

RapidWorkInstruction – for work instructions.

RapidAuthor also contains additional tools for viewing final documents. These are Cortona3D Viewer (3D VRML graphics) and Cortona2D Viewer for CGM images and other 2D graphics. For the last ten years Cortona3D Viewer has been one of the most popular 3D viewer for browsing 3D VRML graphics in the Internet.

Cortona3D solutions allow for creating documentation in compliance with international standards such as S1000D, ATA, SCORM and support HTML, PDF, XML, SGML formats.

About Cortona3D

Cortona3D provides innovative 3D visual software for creating interactive digital technical documentation – maintenance manuals, parts catalogs, training materials, work instructions. Proven benefits of Cortona3D solutions are three times faster production, 60% cost savings and improved quality. Customers include Boeing, Airbus, ESA, Irkut Corporation, Sukhoi Aviation Holding Company.

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